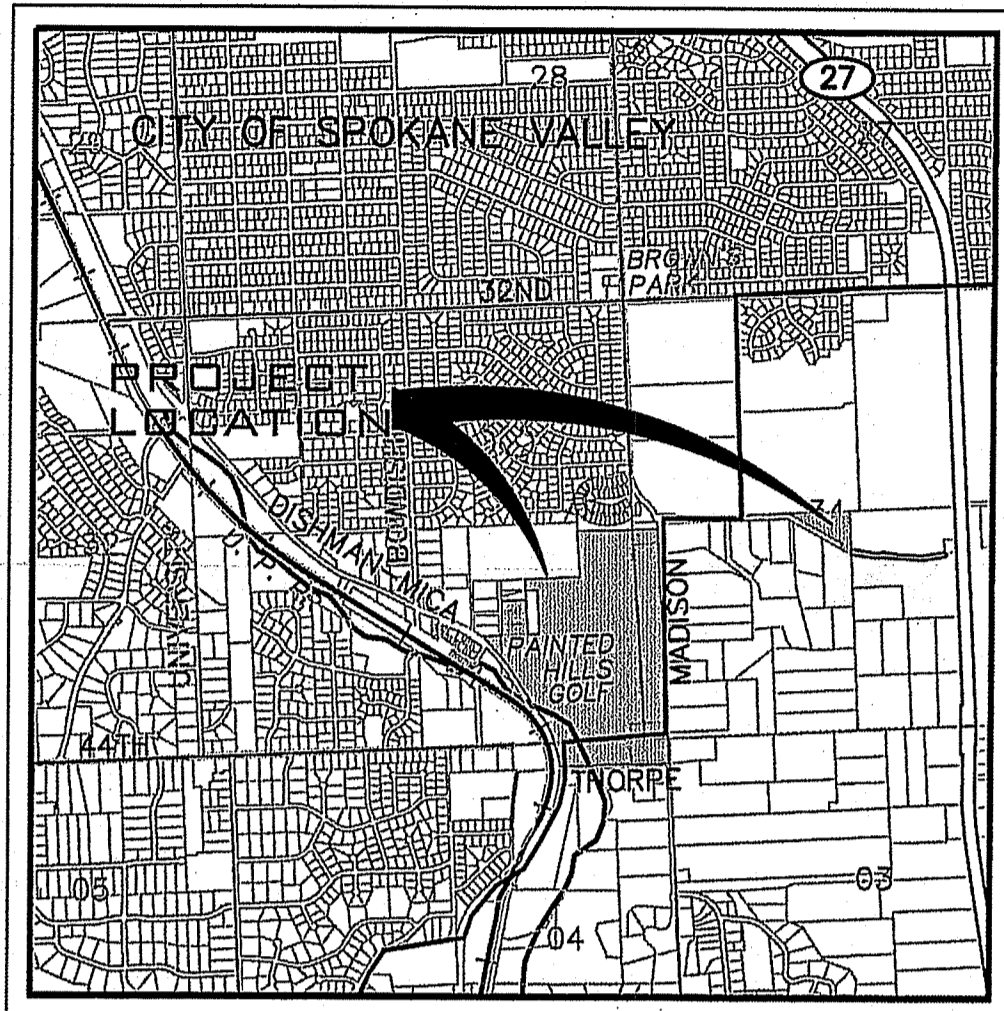


# IMPROVEMENT PLANS PAINTED HILLS FLOOD CONTROL PLANS

LOCATED IN A PORTION OF  
SE 1/4, SEC. 33, T.25N., R. 44E., W.M.  
CITY OF SPOKANE VALLEY, WA

UNDERGROUND SERVICE ALERT  
ONE-CALL NUMBER  
**811**  
CALL TWO BUSINESS DAYS  
BEFORE YOU DIG



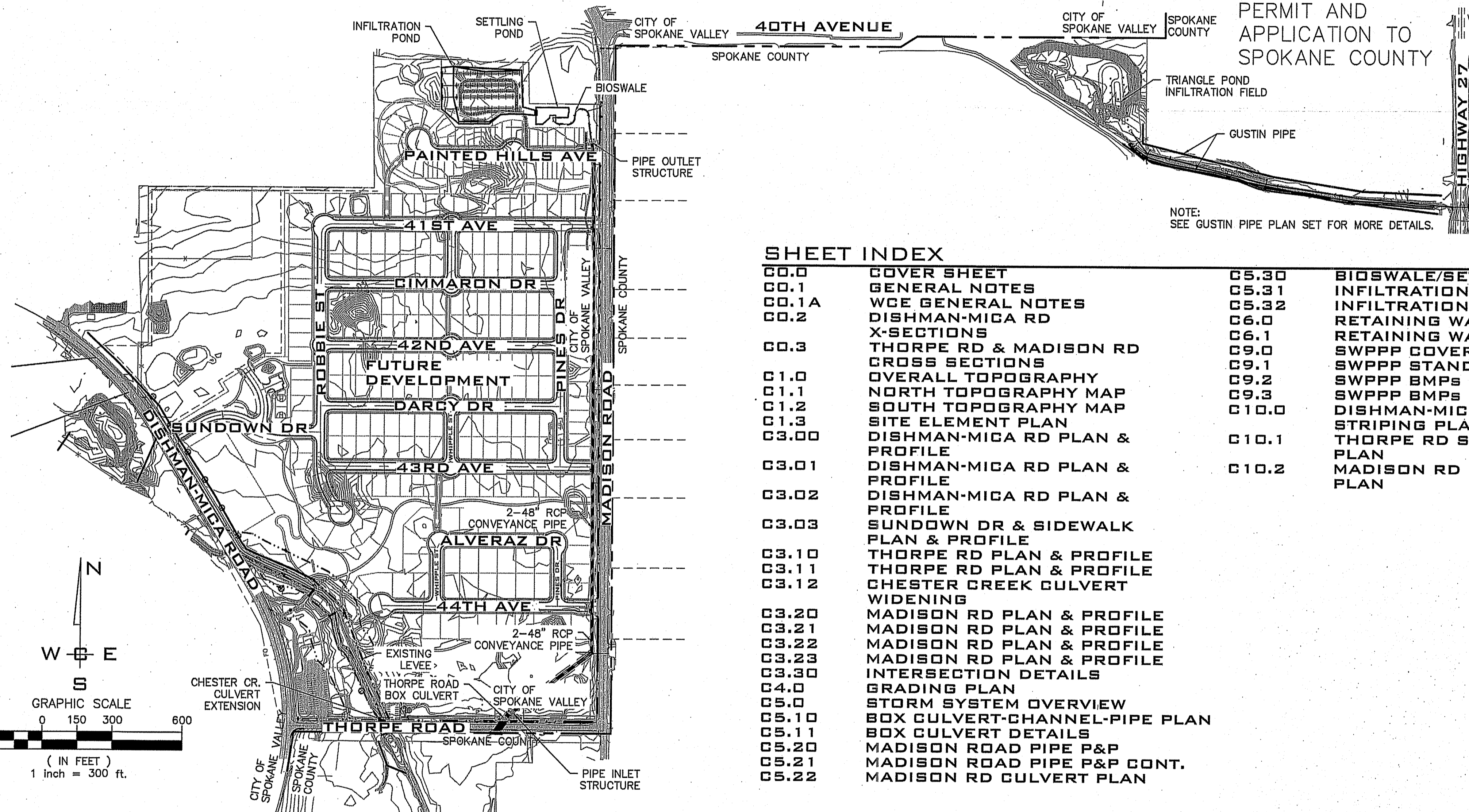
LOCATION MAP

## LEGEND

| EXISTING          | DESCRIPTION               | PROPOSED |
|-------------------|---------------------------|----------|
| ---               | ROADWAY CENTER LINE       | ---      |
| ---               | RIGHT OF WAY LINE         | ---      |
| ---               | PROPERTY LINE             | ---      |
| ---               | EASEMENT LINE             | ---      |
| -x-x-             | FENCE                     | -x-x-    |
| -c-c-             | CURB                      | -c-c-    |
| -p-p-             | PAVEMENT                  | -p-p-    |
| -g-g-             | GRAVEL                    | -g-g-    |
| -c-c-             | CONCRETE                  | -c-c-    |
| -b-b-             | BUILDINGS & STRUCTURES    | -b-b-    |
| -m-m-             | MONUMENT                  | -m-m-    |
| <b>SEWER</b>      |                           |          |
| -s-s-             | SANITARY SEWER            | -s-s-    |
| o                 | MANHOLE                   | o        |
| o                 | CLEANOUT                  | o        |
| o                 | SEWER SERVICE             | o        |
| <b>WATER</b>      |                           |          |
| -w-w-             | WATER LINE                | -w-w-    |
| v                 | VALVE                     | v        |
| h                 | FIRE HYDRANT              | h        |
| h                 | SERVICE                   | h        |
| m                 | WATER METER               | m        |
| o                 | BLOWOFF                   | o        |
| o                 | AIR VACUUM RELIEF STATION | o        |
| <b>DRAINAGE</b>   |                           |          |
| -d-d-             | DRAINAGE LINE             | -d-d-    |
| o                 | MANHOLE                   | o        |
| o                 | DRYWELL                   | o        |
| o                 | CATCH BASIN               | o        |
| -d-d-             | DITCH                     | -d-d-    |
| <b>GAS</b>        |                           |          |
| -g-g-             | GAS LINE                  | -g-g-    |
| v                 | VALVE                     | v        |
| m                 | METER                     | m        |
| <b>TELE-POWER</b> |                           |          |
| -bt-bt-           | BURIED TELEPHONE          | -bt-bt-  |
| o                 | POWER OR TELEPHONE POLE   | o        |
| -bp-bp-           | BURIED POWER              | -bp-bp-  |
| o                 | TRANSFORMER PAD           | o        |
| o                 | TELEPHONE RISER           | o        |
| o                 | TELEPHONE VAULT           | o        |
| o                 | OVERHEAD POWER            | o        |
| o                 | GUY ANCHOR                | o        |
| o                 | POWER VAULT               | o        |
| o                 | LIGHT POLE                | o        |

## ABBREVIATIONS

|                               |                                  |                                  |
|-------------------------------|----------------------------------|----------------------------------|
| ACT. LEN. .... ACTUAL LENGTH  | GB ..... GRADE BREAK             | PRC ..... POINT OF REVERSE CURVE |
| BDY ..... BOUNDARY            | FT./FT. .... FEET PER FOOT       | PT ..... POINT OF TANGENCY       |
| CO ..... SEWER CLEANOUT       | HYD ..... HYDRANT                | RIM EL. .... RIM ELEVATION       |
| CSTC ..... CRUSHED SURFACE    | I.E. .... INVERT ELEVATION       | RD ..... ROAD                    |
| CT ..... COURT                | LN ..... LANE                    | RT ..... RIGHT                   |
| DIA ..... DIAMETER            | LT ..... LEFT                    | SI ..... STREET INTERSECTION     |
| EGR ..... END OF CURVE RADIUS | MH ..... MANHOLE                 | SS ..... SANITARY SEWER          |
| EXIST. .... EXISTING          | MCR ..... MIDDLE OF CURVE RADIUS | STA. .... STATION                |
| G ..... GRADE                 | PC ..... POINT OF CURVATURE      | STA. LEN. .... STATION LENGTH    |
|                               | PET ..... PETROLEUM              | TG ..... TOP OF GRATE            |
|                               | PI ..... POINT OF INTERSECTION   | TC ..... TOP OF CURB             |



SITE PLAN VIEW

SCALE: 1"=300'

## SHEET INDEX

|       |                                       |       |   |
|-------|---------------------------------------|-------|---|
| CO.0  | COVER SHEET                           | C5.30 | BIOSWALE/SETTLING POND P&P              |
| CO.1  | GENERAL NOTES                         | C5.31 | INFILTRATION POND PLAN                  |
| CO.1A | WCE GENERAL NOTES                     | C5.32 | INFILTRATION PONDS DETAILS              |
| CO.2  | DISHMAN-MICA RD X-SECTIONS            | C6.0  | RETAINING WALL SECTIONS                 |
| CO.3  | THORPE RD & MADISON RD CROSS SECTIONS | C6.1  | RETAINING WALL DETAILS                  |
| C1.0  | OVERALL TOPOGRAPHY                    | C9.0  | SWPPP COVER                             |
| C1.1  | NORTH TOPOGRAPHY MAP                  | C9.1  | SWPPP STANDARD NOTES                    |
| C1.2  | SOUTH TOPOGRAPHY MAP                  | C9.2  | SWPPP BMPs                              |
| C1.3  | SITE ELEMENT PLAN                     | C9.3  | SWPPP BMPs                              |
| C3.00 | DISHMAN-MICA RD PLAN & PROFILE        | C10.0 | DISHMAN-MICA RD SIGNING & STRIPING PLAN |
| C3.01 | DISHMAN-MICA RD PLAN & PROFILE        | C10.1 | THORPE RD SIGNING & STRIPING PLAN       |
| C3.02 | DISHMAN-MICA RD PLAN & PROFILE        | C10.2 | MADISON RD SIGNING & STRIPING PLAN      |
| C3.03 | SUNDOWN DR & SIDEWALK PLAN & PROFILE  |       |   |
| C3.10 | THORPE RD PLAN & PROFILE              |       |   |
| C3.11 | THORPE RD PLAN & PROFILE              |       |   |
| C3.12 | CHESTER CREEK CULVERT WIDENING        |       |   |
| C3.20 | MADISON RD PLAN & PROFILE             |       |   |
| C3.21 | MADISON RD PLAN & PROFILE             |       |   |
| C3.22 | MADISON RD PLAN & PROFILE             |       |   |
| C3.23 | MADISON RD PLAN & PROFILE             |       |   |
| C3.30 | INTERSECTION DETAILS                  |       |   |
| C4.0  | GRADING PLAN                          |       |   |
| C5.0  | STORM SYSTEM OVERVIEW                 |       |   |
| C5.10 | BOX CULVERT-CHANNEL-PIPE PLAN         |       |   |
| C5.11 | BOX CULVERT DETAILS                   |       |   |
| C5.20 | MADISON ROAD PIPE P&P                 |       |   |
| C5.21 | MADISON ROAD PIPE P&P CONT.           |       |   |
| C5.22 | MADISON RD CULVERT PLAN               |       |   |

NOTE: SEE GUSTIN PIPE PLAN SET FOR MORE DETAILS.

GUSTIN PIPE UNDER SEPARATE PERMIT AND APPLICATION TO SPOKANE COUNTY

NOTE: CONSTRUCTION OF EVERY DRYWELL AND INFILTRATION GALLERY, INCLUDING FABRIC AND DRAIN ROCK, SHALL BE OBSERVED BY THE ON-SITE INSPECTOR TO CONFIRM THAT THEY MEET THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS/GALLERIES NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.

RECEIVED  
AUG 24 2010  
CITY OF SPOKANE VALLEY

City of Spokane Valley  
Project/Permit No.:  
SUB-2015-0001  
(Subdivision)  
FPD-2016-0007  
(Flood Plain Development)  
EGR-2016-0066  
(Engineered Grading)

City of Spokane Valley  
Development Engineering

Reviewed: \_\_\_\_\_  
New Street Miles - Public: \_\_\_\_\_

Not Reviewed

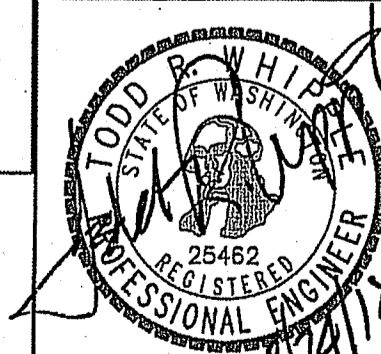
Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2

Date Accepted: \_\_\_\_\_  
Acceptance Comments: \_\_\_\_\_

DEVELOPER APPROVAL

DATE

PLANS  
NOT APPROVED  
BY AGENCY



DATUM: NAVD - 88

TBM S-6 OF THE SOUTH PONDEROSA SEWER PROJECT  
WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67  
(NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

SCALE:

HORIZONTAL:

1" = 300'

VERTICAL:

N/A

PROJ #:

13-1166

DATE:

08/14/18

DRAWN:

JPP/STT

REVIEWED:

TRW

CIVIL STRUCTURAL SURVEYING TRAFFIC PLANNING LANDSCAPE OTHER



WHIPPLE CONSULTING ENGINEERS  
2525 NORTH SULLIVAN ROAD  
SPOKANE VALLEY, WA 99216  
PH: 509-893-2617 FAX: 509-828-0227

**SPOKANE VALLEY PAINTED HILLS PRD  
COVER SHEET  
DISHMAN-MICA RD.  
SPOKANE VALLEY, WA**

SHEET

CO.0

JOB NUMBER

13-1166



**SPOKANE VALLEY  
GENERAL CONSTRUCTION NOTES**

(APPENDIX 4A OF CITY OF SPOKANE VALLEY STREET STANDARDS)

1. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH LATEST EDITION OF THE CITY OF SPOKANE VALLEY STREET STANDARDS, SPOKANE REGIONAL STORMWATER MANUAL AND ALL OTHER GOVERNING AGENCY'S STANDARDS.
2. PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY SERVICE AT 1-800-424-5555 OR 811 BEFORE YOU DIG.
3. LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES.
4. THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF ACCEPTED STREET AND DRAINAGE PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
5. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE APPLICANT'S ENGINEER AND ONSITE INSPECTOR.
6. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THE INFILTRATION CAPACITY OF STORMWATER FACILITIES (E.G., LINE THE FACILITY WITH FILTER FABRIC, OVER-EXCAVATE UPON COMPLETION OF THE INFRASTRUCTURE, ETC.)
7. WHERE DIRECTED BY THE CITY OF SPOKANE VALLEY, THE CONTRACTOR SHALL PLACE TRAFFIC CONTROL DEVICES, THE PLACEMENT AND TYPE OF WHICH SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH AND CONTACT ALL APPROPRIATE UTILITIES INVOLVED PRIOR TO CONSTRUCTION.
9. ALL PAVEMENT CUTS TO CONNECT UTILITIES SHALL BE REPAIRED IN CONFORMANCE WITH THE REGIONAL PAVEMENT CUT POLICY.
10. ALL SURVEY MONUMENTS SHALL BE PROTECTED DURING CONSTRUCTION BY OR UNDER THE DIRECTION OF A LICENSED SURVEYOR AS REQUIRED BY STATE LAW. ANY DISTURBED OR DAMAGED MONUMENTS SHALL BE REPLACED BY OR UNDER THE DIRECTION OF A LICENSED SURVEYOR PRIOR TO CERTIFICATION/FINAL PLAT AND/OR RELEASE OF SURETY. THE CONTRACTOR IS RESPONSIBLE FOR FILING OF PERMITS FOR MONUMENT REMOVAL AND REPLACEMENT WITH THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES, AS REQUIRED BY WAC-120-070.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND ACQUIRING ELECTRICAL INSPECTIONS REQUIRED BY THE STATE.
12. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO INITIATING CONSTRUCTION.
13. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL HAVE A CURRENT CITY OF SPOKANE VALLEY BUSINESS LICENSE.
14. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE LICENSED BY THE STATE OF WASHINGTON AND BONDED TO DO WORK IN THE PUBLIC RIGHT OF WAY.
15. NO WORK ON THIS PROJECT SHALL COMMENCE UNTIL A CITY OF SPOKANE VALLEY RIGHT OF WAY PERMIT HAS BEEN ISSUED.
16. THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES, PUBLIC AND PRIVATE, AT ALL TIMES DURING CONSTRUCTION.
17. CONTRACTORS SHALL CONTROL DUST IN ACCORDANCE WITH REGULATIONS OF LOCAL AIR POLLUTION CONTROL AUTHORITY.
18. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION RELATED DEBRIS TO AN APPROVED WASTE DISPOSAL SITE.
19. FIRE HYDRANTS SHALL BE INSTALLED AND FUNCTIONING PRIOR TO CONSTRUCTION OF ANY STRUCTURES.
20. CONTRACTOR SHALL MAINTAIN FIRE APPARATUS ACCESS STREETS DURING CONSTRUCTION.
21. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ON-SITE INSPECTOR ONE BUSINESS DAY BEFORE ANY CONSTRUCTION OR PRODUCT PLACEMENT TAKES PLACE THAT REQUIRES TESTING OR OBSERVATION (REFER TO APPENDIX 9A- MINIMUM MATERIAL TESTING FREQUENCIES). THE ON-SITE INSPECTOR WILL DETERMINE THE TIME REQUIRED TO SATISFACTORILY ACHIEVE THE NECESSARY TESTING, OBSERVATION, AND DOCUMENTATION. THE ON-SITE INSPECTOR WILL BE REQUIRED TO BE ON SITE 100% OF THE TIME DURING HMA PLACEMENT, TRENCH WORK AND DRYWELL CONSTRUCTION OF EVERY DRYWELL, INCLUDING FABRIC AND DRAINROCK, THE ON-SITE INSPECTOR SHALL CONFIRM THAT THE DRYWELL MEETS THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.

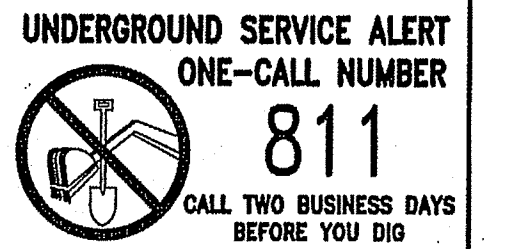
**22. SUPPLEMENTAL NOTES USED WHEN APPLICABLE:**

- A. FOR ANY CURBS GRADES LESS THAN 1.0% (0.01 FT./FT.), A PROFESSIONAL LAND SURVEYOR CURRENTLY LICENSED IN THE STATE OF WASHINGTON SHALL VERIFY THAT THE CURB FORMS ARE AT THE GRADES NOTED ON THE ACCEPTED PLANS, PRIOR TO PLACEMENT OF CONCRETE. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND COORDINATING WORK WITH THE SURVEYOR.
- B. THE CONTRACTOR SHALL EMPLOY A PROFESSIONAL LAND SURVEYOR CURRENTLY LICENSED IN THE STATE OF WASHINGTON TO VERIFY THAT THE CROSS-GUTTER FORMS ARE AT THE CORRECT PLANE GRADE PRIOR TO CONCRETE PLACEMENT.
- C. CONCRETE APRONS ARE REQUIRED AT THE INLET INTO ANY SWALE OR POND. THE FINISH GRADE OF THE SWALE/POND SIDE SLOPE, WHERE THE CONCRETE INLET APRON ENDS, SHALL BE A MINIMUM OF 2 INCHES BELOW THE FINISH ELEVATION OF THE CONCRETE CURB APRON EXTENSION. THE INTENTION IS TO ALLOW STORMWATER RUNOFF TO ENTER THE SWALE/POND UNOBSTRUCTED, WITHOUT BACKING UP INTO THE STREET AND GUTTER DUE TO SOD OVERGROWTH AT THE INLET.
- D. UNLINED POND AND BIO-INFILTRATION SWALE BOTTOMS ARE EXPECTED TO INFILTRATE VIA THE POND FLOOR, AND THEREFORE, SHALL NOT BE HEAVILY COMPACTED; EQUIPMENT TRAFFIC SHALL BE MINIMIZED ON THE POND BOTTOMS. THE FACILITY SUB-GRADE SHALL BE A MEDIUM- TO WELL-DRAINING MATERIAL, WITH A MINIMUM THICKNESS OF 48 INCHES AND A MINIMUM INFILTRATION RATE OF 0.15 IN./HR., THE FACILITY SHALL DRAIN WITHIN 72 HOURS OF A STORM EVENT. IF THE POND ALSO SERVES AS A WATER QUALITY TREATMENT FACILITY, THE TREATMENT ZONE (SOD AND 6 INCHES OF TREATMENT SOIL) SHALL BE A MEDIUM- TO WELL-DRAINING MATERIAL, WITH A MINIMUM INFILTRATION OF 0.25-0.50 IN./HR. SCARIFY THE FINISH GRADE OF THE POND BOTTOM PRIOR TO HYDROSEEDING/SODDING. TESTING THAT VERIFIES SUBGRADE MINIMUM INFILTRATION RATE MAY BE REQUIRED BY THE LOCAL JURISDICTION PRIOR TO CONSTRUCTION CERTIFICATION TO ENSURE ADEQUATE DRAINAGE. INFILTRATIVE TESTING OF THE TREATMENT ZONE IS ONLY REQUIRED IF SOILS OTHER THAN SILTY LOAM OR LOAMY SOILS ARE PROPOSED.
- E. IF DURING FINAL INSPECTION, IT IS FOUND THAT THE CONSTRUCTED POND OR SWALE DOES NOT CONFORM TO THE ACCEPTED DESIGN, THE SYSTEM SHALL BE RECONSTRUCTED SO THAT IT DOES COMPLY. REFER TO APPENDIX 9A OF THE SPOKANE REGIONAL STORMWATER MANUAL FOR EROSION AND SEDIMENT CONTROL STANDARD NOTES.

**STORM DRAINAGE NOTES**

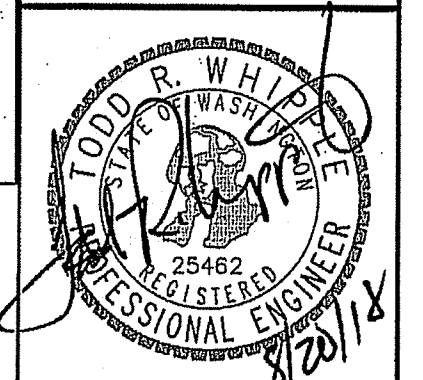
CITY OF SPOKANE VALLEY ADDITIONAL NOTES:

- A) PER SPOKANE REGIONAL STORMWATER MANUAL METHODS, A QUALIFIED LICENSED ENGINEER SHALL EVALUATE, CLASSIFY AND DOCUMENT THE SOILS IN THE EXCAVATED DRYWELL INFILTRATION ZONE PRIOR TO INSTALLATION OF THE FILTER FABRIC, DRAINAGE ROCK OR DRYWELL BARREL AND SHALL DETERMINE IF THE SOIL'S CONDITIONS WILL BE SUITABLE AND CAPABLE OF INFILTRATING STORM WATER AT THE DESIGN FLOW RATE. THE ENGINEER SHALL SUBMIT A COPY OF THE DOCUMENTATION DETAILING THE OBSERVATIONS, THE CONCLUSIONS AND THE BASIS FOR THE CONCLUSIONS TO CITY OF SPOKANE VALLEY DEVELOPMENT ENGINEERING. IF THE ENGINEER DETERMINES THAT THE SOILS DO NOT MEET THE DESIGN'S REQUIREMENTS OR THAT A CONDITION EXISTS PREVENTING THE DRYWELL FROM FUNCTIONING AS DESIGNED, THE DESIGN ENGINEER SHALL BE NOTIFIED AND THE DESIGN REVISED TO MEET EXISTING CONDITIONS. ANY REVISIONS TO THE DESIGN SHALL BE SUBMITTED TO THE CITY OF SPOKANE VALLEY FOR REVIEW AND ACCEPTANCE.
- B) CONSTRUCTION OF EVERY DRYWELL, INCLUDING FABRIC AND DRAIN ROCK, SHALL BE OBSERVED BY THE ON-SITE INSPECTOR TO CONFIRM THAT IT MEETS THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.



City of Spokane Valley  
Project/Permit No.:  
SUB-2015-0001  
(Subdivision)  
FPD-2016-0007  
(Flood Plain Development)  
EGR-2016-0066  
(Engineered Grading)  
City of Spokane Valley  
Development Engineering

Reviewed:  
New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
Date Accepted \_\_\_\_\_  
Acceptance Comments \_\_\_\_\_



**PLANS  
NOT APPROVED  
BY AGENCY**

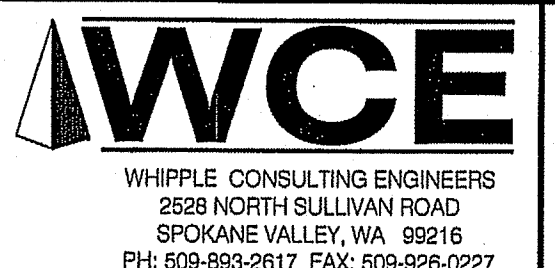
DATUM: NAVD - 88  
TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
WITH AN ELEVATION OF 2005.87 (NAVD20) = 2009.67  
(NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
MAP.

|   |          |     |                      |  |
|---|----------|-----|----------------------|--|
|   |          |     |                      |  |
|   |          |     |                      |  |
|   |          |     |                      |  |
| 1 | 08-12-16 | JPP | ORIGINAL PREPARATION |  |
|   |          |     | REVISIONS            |  |

**SCALE:**  
HORIZONTAL: N/A  
VERTICAL: N/A

PROJ #: 13-1166  
DATE: 07/19/18  
DRAWN: RMA  
REVIEWED: TRW

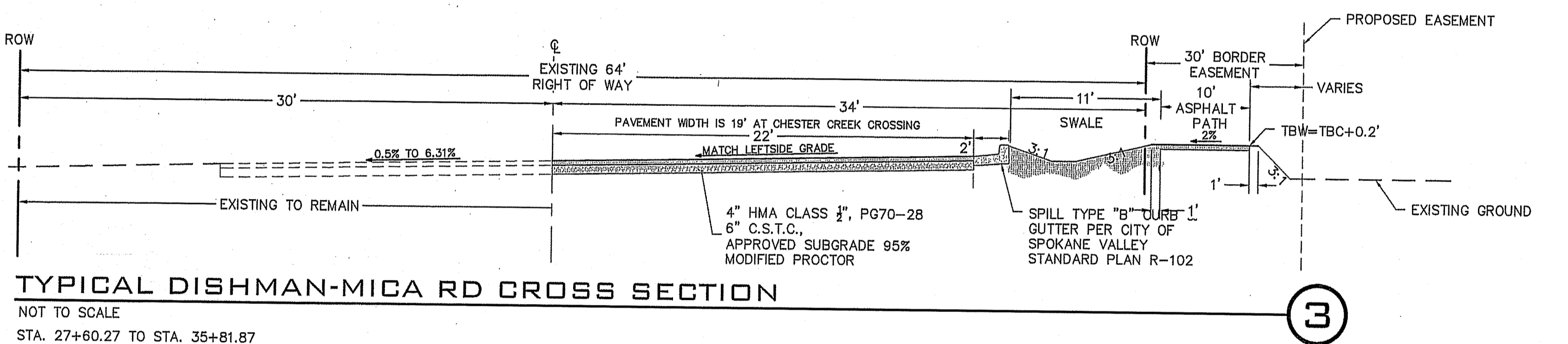
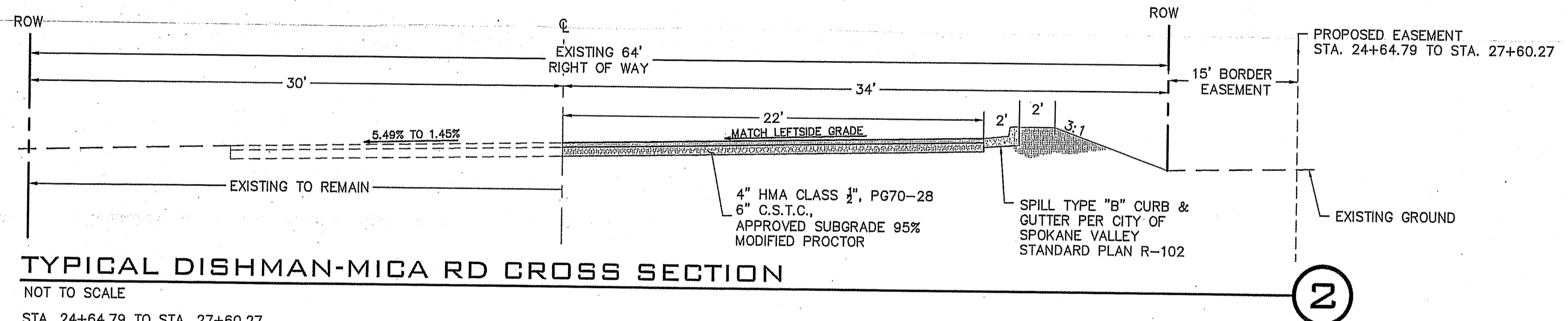
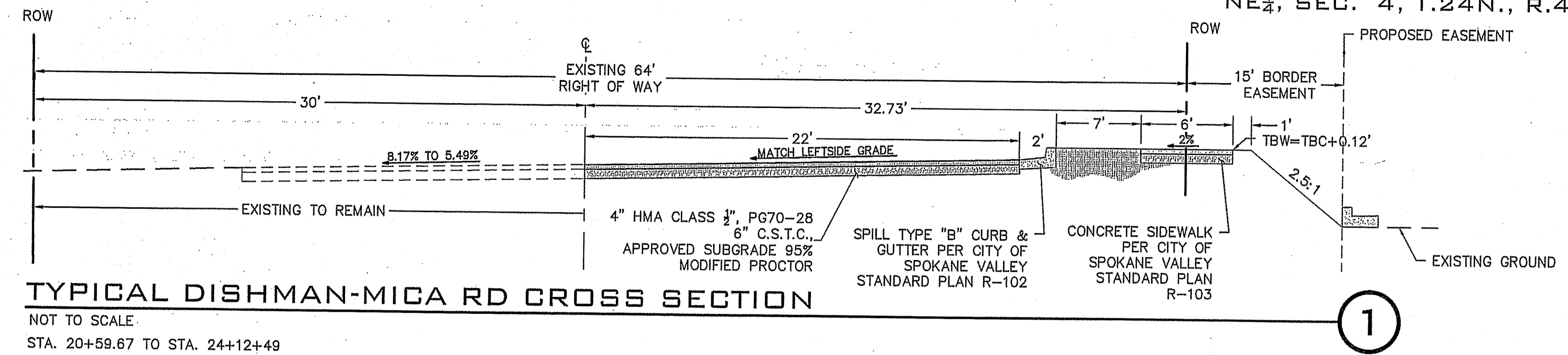
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| <input type="checkbox"/> SURVEYING        |
| <input type="checkbox"/> TRAFFIC          |
| <input type="checkbox"/> PLANNING         |
| <input type="checkbox"/> LANDSCAPE        |
| <input type="checkbox"/> OTHER            |



**SPOKANE VALLEY PAINTED HILLS PRD  
GENERAL NOTES  
DISHMAN-MICA RD.  
SPOKANE VALLEY, WA**

**SHEET  
CO.1**  
JOB NUMBER  
13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



ROAD: DISHMAN-MICA RD

| Station | Dist. Elev. | LT/Elev. | CL/Grade | CL to E.P.L.T. | Existing Left Cross Slope | Dist. CL to Sewer | EX Elev @ Sewer | Dist. Sewer to Lip of Gutter | Top of Gutter @ 4.5% | Min. Gutter @ 2.0% | Proposed Gutter Elev. | Proposed FU Grade | Sta. | Cross-slope |
|---------|-------------|----------|----------|----------------|---------------------------|-------------------|-----------------|------------------------------|----------------------|--------------------|-----------------------|-------------------|------|-------------|
| 2000.00 | 2022.60     | 2021.13  | 18.00    | 0.0817         | 0.00                      | 2022.60           | 22.00           | 2021.99                      | 2022.64              | 2024.78            | 2020.00               | -0.0617           |      |             |
| 2050.00 | 2022.77     | 2021.68  | 18.00    | 0.0606         | 0.00                      | 2022.77           | 22.00           | 2022.16                      | 2022.71              | 2024.48            | 2050.00               | -0.0508           |      |             |
| 2068.27 | 2022.84     | 2021.78  | 18.00    | 0.0581         | 0.00                      | 2022.84           | 22.00           | 2022.29                      | 2022.78              | 2024.52            | 2068.27               | -0.0591           |      |             |
| 2100.00 | 2023.12     | 2022.06  | 18.00    | 0.0588         | 0.00                      | 2023.12           | 22.00           | 2022.51                      | 2023.08              | 2024.79            | 2100.00               | -0.0588           |      |             |
| 2150.00 | 2023.96     | 2022.34  | 18.00    | 0.0576         | 0.00                      | 2023.96           | 22.00           | 2022.77                      | 2023.32              | 2025.02            | 2150.00               | -0.0576           |      |             |
| 2200.00 | 2023.50     | 2022.44  | 18.00    | 0.0591         | 0.00                      | 2023.50           | 22.00           | 2022.89                      | 2023.44              | 2025.18            | 2200.00               | -0.0591           |      |             |
| 2250.00 | 2023.62     | 2022.48  | 18.00    | 0.0580         | 0.00                      | 2023.62           | 22.00           | 2022.91                      | 2023.46              | 2025.18            | 2250.00               | -0.0580           |      |             |
| 2300.00 | 2023.33     | 2022.29  | 18.00    | 0.0579         | 0.00                      | 2023.33           | 22.00           | 2022.72                      | 2023.27              | 2024.99            | 2300.00               | -0.0579           |      |             |
| 2350.00 | 2022.99     | 2021.96  | 18.00    | 0.0589         | 0.00                      | 2022.99           | 22.00           | 2022.37                      | 2022.92              | 2024.81            | 2350.00               | -0.0589           |      |             |
| 2400.00 | 2022.51     | 2021.51  | 18.00    | 0.0568         | 0.00                      | 2022.51           | 22.00           | 2021.90                      | 2022.45              | 2024.11            | 2400.00               | -0.0568           |      |             |
| 2450.00 | 2021.94     | 2020.95  | 18.00    | 0.0549         | 0.00                      | 2021.94           | 22.00           | 2021.33                      | 2021.88              | 2023.53            | 2450.00               | -0.0549           |      |             |
| 2500.00 | 2021.13     | 2020.18  | 18.00    | 0.0527         | 0.00                      | 2021.13           | 22.00           | 2020.52                      | 2021.07              | 2022.67            | 2500.00               | -0.0527           |      |             |
| 2550.00 | 2020.68     | 2019.20  | 18.00    | 0.0490         | 0.00                      | 2020.68           | 22.00           | 2019.47                      | 2020.02              | 2021.84            | 2550.00               | -0.0490           |      |             |
| 2600.00 | 2019.00     | 2018.16  | 18.00    | 0.0468         | 0.00                      | 2019.00           | 22.00           | 2018.39                      | 2018.94              | 2020.40            | 2600.00               | -0.0468           |      |             |
| 2650.00 | 2017.67     | 2017.11  | 18.00    | 0.0358         | 0.00                      | 2017.67           | 22.00           | 2017.05                      | 2017.61              | 2016.72            | 2650.00               | -0.0358           |      |             |
| 2700.00 | 2016.08     | 2015.84  | 18.00    | 0.0133         | 0.00                      | 2016.08           | 22.00           | 2016.47                      | 2016.02              | 2016.75            | 2700.00               | -0.0133           |      |             |
| 2725.85 | 2015.43     | 2015.20  | 18.00    | 0.0128         | 0.00                      | 2015.43           | 22.00           | 2014.82                      | 2015.37              | 2016.10            | 2725.85               | -0.0128           |      |             |
| 2750.00 | 2014.72     | 2014.48  | 18.00    | 0.0145         | 0.00                      | 2014.72           | 22.00           | 2014.11                      | 2014.66              | 2015.42            | 2750.00               | -0.0145           |      |             |
| 2797.99 | 2013.57     | 2013.32  | 18.00    | 0.0137         | 0.00                      | 2013.57           | 22.00           | 2012.96                      | 2013.51              | 2014.28            | 2797.99               | -0.0137           |      |             |
| 2800.00 | 2013.51     | 2013.27  | 18.00    | 0.0133         | 0.00                      | 2013.51           | 22.00           | 2012.90                      | 2013.45              | 2014.18            | 2800.00               | -0.0133           |      |             |
| 2850.00 | 2012.73     | 2012.80  | 18.00    | 0.0070         | 0.00                      | 2012.73           | 22.00           | 2012.12                      | 2012.67              | 2013.38            | 2850.00               | -0.0070           |      |             |
| 2900.00 | 2011.94     | 2011.80  | 18.00    | 0.0078         | 0.00                      | 2011.94           | 22.00           | 2011.33                      | 2011.88              | 2012.49            | 2900.00               | -0.0078           |      |             |
| 2950.00 | 2011.06     | 2010.99  | 18.00    | 0.0034         | 0.00                      | 2011.06           | 22.00           | 2010.44                      | 2010.99              | 2011.51            | 2950.00               | -0.0034           |      |             |
| 3000.00 | 2010.77     | 2010.63  | 18.00    | 0.0079         | 0.00                      | 2010.77           | 22.00           | 2010.16                      | 2010.71              | 2011.33            | 3000.00               | -0.0079           |      |             |
| 3050.00 | 2010.35     | 2010.20  | 18.00    | 0.0086         | 0.00                      | 2010.35           | 22.00           | 2009.74                      | 2010.29              | 2010.82            | 3050.00               | -0.0086           |      |             |
| 3100.00 | 2010.20     | 2010.16  | 18.00    | 0.0023         | 0.00                      | 2010.20           | 22.00           | 2009.59                      | 2010.14              | 2010.63            | 3100.00               | -0.0023           |      |             |
| 3150.00 | 2010.07     | 2009.98  | 18.00    | 0.0050         | 0.00                      | 2010.07           | 22.00           | 2009.46                      | 2010.01              | 2010.58            | 3150.00               | -0.0050           |      |             |
| 3200.00 | 2009.82     | 2009.98  | 18.00    | -0.0089        | 0.00                      | 2009.82           | 22.00           | 2009.21                      | 2009.78              | 2010.00            | 3200.00               | 0.0089            |      |             |
| 3250.00 | 2009.71     | 2009.32  | 18.00    | 0.0217         | 0.00                      | 2009.71           | 22.00           | 2009.10                      | 2009.65              | 2010.37            | 3250.00               | -0.0217           |      |             |
| 3285.69 | 2009.43     | 2009.26  | 18.00    | 0.0094         | 0.00                      | 2009.43           | 22.00           | 2008.82                      | 2009.37              | 2010.02            | 3285.69               | -0.0094           |      |             |
| 3300.00 | 2009.38     | 2009.03  | 18.00    | 0.0184         | 0.00                      | 2009.38           | 22.00           | 2008.77                      | 2009.32              | 2010.19            | 3300.00               | -0.0184           |      |             |
| 3350.00 | 2009.20     | 2008.73  | 18.00    | 0.0281         | 0.00                      | 2009.20           | 22.00           | 2008.69                      | 2009.14              | 2010.15            | 3350.00               | -0.0281           |      |             |
| 3378.66 | 2009.10     | 2008.56  | 18.00    | 0.0350         | 0.00                      | 2009.10           | 22.00           | 2008.49                      | 2009.04              | 2010.14            | 3378.66               | -0.0350           |      |             |
| 3400.00 | 2009.02     | 2008.44  | 18.00    | 0.0322         | 0.00                      | 2009.02           | 22.00           | 2008.41                      | 2008.86              | 2010.11            | 3400.00               | -0.0322           |      |             |
| 3450.00 | 2008.95     | 2008.14  | 18.00    | 0.0384         | 0.00                      | 2008.95           | 22.00           | 2008.24                      | 2008.79              | 2010.10            | 3450.00               | -0.0384           |      |             |
| 3476.74 | 2008.76     | 2008.01  | 18.00    | 0.0414         | 0.00                      | 2008.76           | 22.00           | 2008.15                      | 2008.70              | 2010.08            | 3476.74               | -0.0414           |      |             |
| 3500.00 | 2008.71     | 2007.85  | 18.00    | 0.0476         | 0.00                      | 2008.71           | 22.00           | 2008.10                      | 2008.65              | 2010.13            | 3500.00               | -0.0476           |      |             |
| 3550.00 | 2008.64     | 2007.65  | 18.00    | 0.0551         | 0.00                      | 2008.64           | 22.00           | 2007.83                      | 2008.48              | 2010.13            | 3550.00               | -0.0551           |      |             |
| 3596.01 | 2008.53     | 2007.48  | 18.00    | 0.0584         | 0.00                      | 2008.53           | 22.00           | 2007.92                      | 2008.47              | 2010.20            | 3596.01               | -0.0584           |      |             |
| 3582.95 | 2008.51     | 2007.38  | 18.00    | 0.0630         | 0.00                      | 2008.51           | 22.00           | 2007.90                      | 2008.45              | 2010.28            | 3582.95               | -0.0630           |      |             |
| 3600.00 | 2008.49     | 2007.31  | 18.00    | 0.0555         | 0.00                      | 2008.49           | 22.00           | 2007.88                      | 2008.43              | 2010.31            | 3600.00               | -0.0555           |      |             |
| 3650.00 | 2008.39     | 2007.25  | 18.00    | 0.0631         | 0.00                      | 2008.39           | 22.00           | 2007.78                      | 2008.33              | 2010.15            | 3650.00               | -0.0631           |      |             |

UNDERGROUND SERVICE ALERT  
ONE-CALL NUMBER  
811  
CALL TWO BUSINESS DAYS BEFORE YOU DIG

DATUM: NAVD - 88  
TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.87  
(NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
MAP.

| NO. |          |     |  | DATE |  |  |  | BY |  |  |  | ORIGINAL PREPARATION |  |  |  | REVISIONS |  |  |  |  |  |  |  |
|-----|----------|-----|--|------|--|--|--|----|--|--|--|----------------------|--|--|--|-----------|--|--|--|--|--|--|--|
| 1   | 08-12-16 | JPP |  |      |  |  |  |    |  |  |  |                      |  |  |  |           |  |  |  |  |  |  |  |

SCALE:  
HORIZONTAL: N/A  
VERTICAL: N/A

PROJ #: 13-1166  
DATE: 07/19/18  
DRAWN: JPP  
REVIEWED: TRW

CIVIL  
STRUCTURAL  
SURVEYING  
TRAFFIC  
PLANNING  
LANDSCAPE  
OTHER



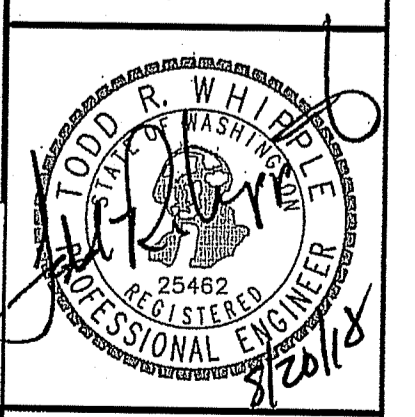
SPOKANE VALLEY PAINTED HILLS PRD  
DISHMAN-MICA RD CROSS SECTIONS  
DISHMAN-MICA RD.  
SPOKANE VALLEY, WA

PLANS  
NOT APPROVED  
BY AGENCY

City of Spokane Valley  
Project/Permit No.:  
SUB-2015-001  
(Subdivision)  
FPD-2016-007  
(Flood Plain Development)  
EGR-2016-006  
(Engineered Grading)

City of Spokane Valley  
Development Engineering

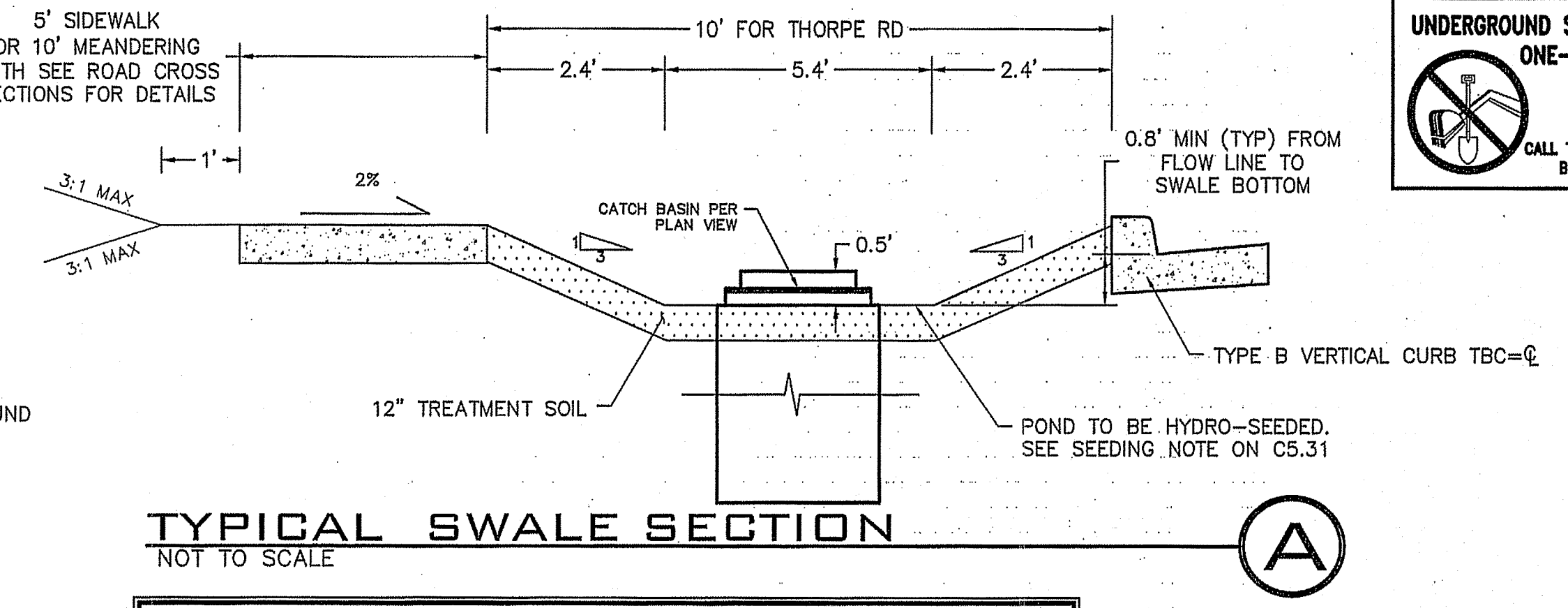
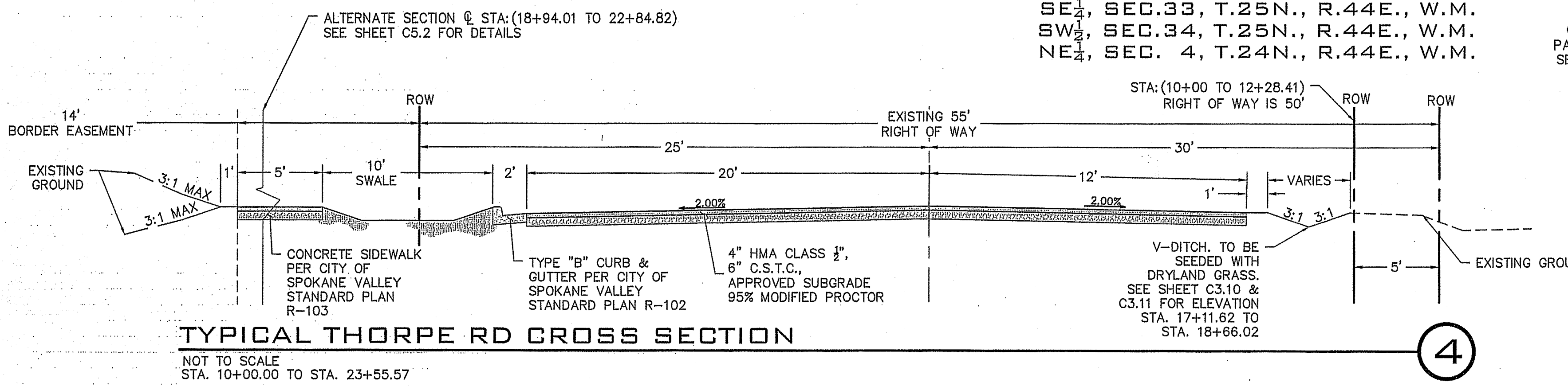
Revised: \_\_\_\_\_  
New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
Date Accepted: \_\_\_\_\_  
Acceptance Comments: \_\_\_\_\_



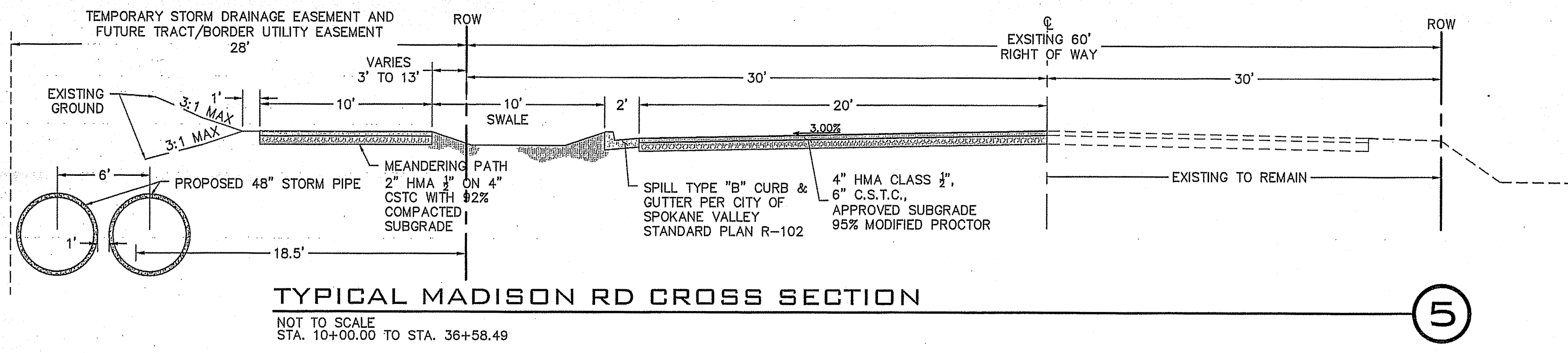
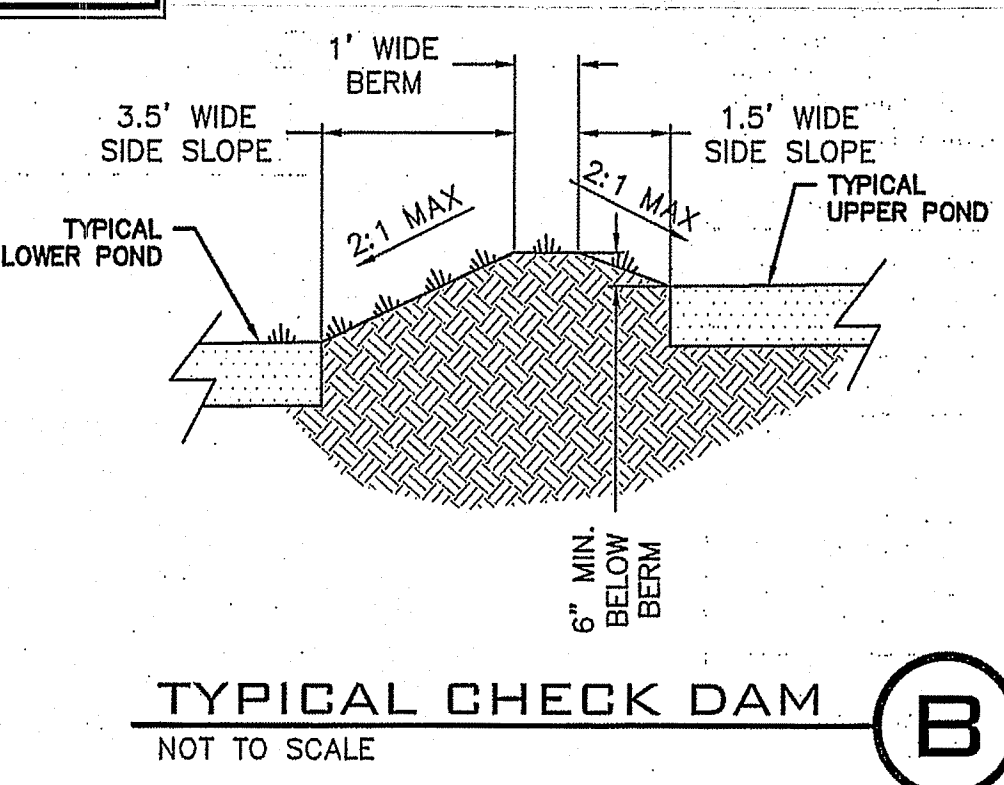
SHEET  
C0.2  
JOB NUMBER  
13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG



**TREATMENT SOIL NOTE:**  
 12" OF TREATMENT SOIL CONSISTING OF A THOROUGHLY BLENDED MIX OF 50% COMPOST WITH 50% NATIVE SOIL. SWALE BOTTOM TO BE HYDROSEEDED OR SODDED.



| Station | Old Elev. | New Elev. | Grade | Proposed Elev. | Proposed Slope |
|---------|-----------|-----------|-------|----------------|----------------|
| 1051.46 | 2014.24   | 2014.24   | 0.00  | 2014.24        | 0.0000         |
| 1100.00 | 2013.89   | 2013.89   | 0.00  | 2013.89        | 0.0000         |
| 1150.00 | 2013.50   | 2013.50   | 0.00  | 2013.50        | 0.0000         |
| 1200.00 | 2013.12   | 2013.12   | 0.00  | 2013.12        | 0.0000         |
| 1250.00 | 2012.76   | 2012.76   | 0.00  | 2012.76        | 0.0000         |
| 1300.00 | 2012.26   | 2012.26   | 0.00  | 2012.26        | 0.0000         |
| 1350.00 | 2011.82   | 2011.82   | 0.00  | 2011.82        | 0.0000         |
| 1400.00 | 2011.19   | 2011.19   | 0.00  | 2011.19        | 0.0000         |
| 1450.00 | 2010.14   | 2010.14   | 0.00  | 2010.14        | 0.0000         |
| 1500.00 | 2009.89   | 2009.89   | 0.00  | 2009.89        | 0.0000         |
| 1550.00 | 2009.68   | 2009.68   | 0.00  | 2009.68        | 0.0000         |
| 1600.00 | 2009.83   | 2009.83   | 0.00  | 2009.83        | 0.0000         |
| 1700.00 | 2008.87   | 2008.87   | 0.00  | 2008.87        | 0.0000         |
| 1750.00 | 2010.04   | 2010.04   | 0.00  | 2010.04        | 0.0000         |
| 1800.00 | 2010.16   | 2010.16   | 0.00  | 2010.16        | 0.0000         |

| Station | Old Elev. | New Elev. | Grade | Proposed Elev. | Proposed Slope |
|---------|-----------|-----------|-------|----------------|----------------|
| 1850.00 | 2010.19   | 2010.19   | 0.00  | 2010.19        | 0.0000         |
| 1900.00 | 2009.19   | 2009.19   | 0.00  | 2009.19        | 0.0000         |
| 1950.00 | 2008.89   | 2008.89   | 0.00  | 2008.89        | 0.0000         |
| 2000.00 | 2009.85   | 2009.85   | 0.00  | 2009.85        | 0.0000         |
| 2050.00 | 2009.48   | 2009.48   | 0.00  | 2009.48        | 0.0000         |
| 2100.00 | 2009.16   | 2009.16   | 0.00  | 2009.16        | 0.0000         |
| 2150.00 | 2008.91   | 2008.91   | 0.00  | 2008.91        | 0.0000         |
| 2200.00 | 2008.89   | 2008.89   | 0.00  | 2008.89        | 0.0000         |
| 2250.00 | 2008.89   | 2008.89   | 0.00  | 2008.89        | 0.0000         |
| 2300.00 | 2009.05   | 2009.05   | 0.00  | 2009.05        | 0.0000         |
| 2350.00 | 2009.28   | 2009.28   | 0.00  | 2009.28        | 0.0000         |
| 2400.00 | 2009.54   | 2009.54   | 0.00  | 2009.54        | 0.0000         |
| 2450.00 | 2009.81   | 2009.81   | 0.00  | 2009.81        | 0.0000         |
| 2500.00 | 2009.89   | 2009.89   | 0.00  | 2009.89        | 0.0000         |
| 2550.00 | 2010.12   | 2010.12   | 0.00  | 2010.12        | 0.0000         |
| 2600.00 | 2009.80   | 2009.80   | 0.00  | 2009.80        | 0.0000         |
| 2650.00 | 2009.81   | 2009.81   | 0.00  | 2009.81        | 0.0000         |
| 2700.00 | 2009.30   | 2009.30   | 0.00  | 2009.30        | 0.0000         |
| 2750.00 | 2008.78   | 2008.78   | 0.00  | 2008.78        | 0.0000         |
| 2800.00 | 2008.68   | 2008.68   | 0.00  | 2008.68        | 0.0000         |
| 2850.00 | 2008.67   | 2008.67   | 0.00  | 2008.67        | 0.0000         |

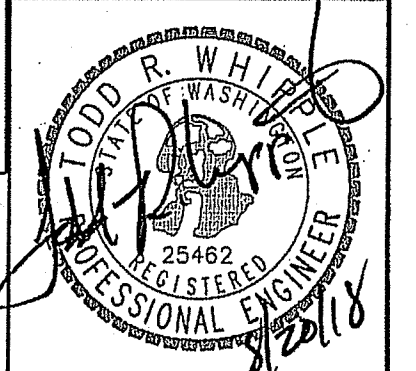
| Station | Old Elev. | New Elev. | Grade | Proposed Elev. | Proposed Slope |
|---------|-----------|-----------|-------|----------------|----------------|
| 2900.00 | 2008.46   | 2008.46   | 0.00  | 2008.46        | 0.0000         |
| 2950.00 | 2008.36   | 2008.36   | 0.00  | 2008.36        | 0.0000         |
| 3000.00 | 2008.28   | 2008.28   | 0.00  | 2008.28        | 0.0000         |
| 3050.00 | 2008.26   | 2008.26   | 0.00  | 2008.26        | 0.0000         |
| 3102.04 | 2008.25   | 2008.25   | 0.00  | 2008.25        | 0.0000         |
| 3150.04 | 2008.16   | 2008.16   | 0.00  | 2008.16        | 0.0000         |
| 3200.00 | 2008.39   | 2008.39   | 0.00  | 2008.39        | 0.0000         |
| 3250.00 | 2008.31   | 2008.31   | 0.00  | 2008.31        | 0.0000         |
| 3300.00 | 2008.10   | 2008.10   | 0.00  | 2008.10        | 0.0000         |
| 3350.00 | 2007.86   | 2007.86   | 0.00  | 2007.86        | 0.0000         |
| 3402.02 | 2007.88   | 2007.88   | 0.00  | 2007.88        | 0.0000         |
| 3500.98 | 2007.53   | 2007.53   | 0.00  | 2007.53        | 0.0000         |
| 3550.00 | 2007.27   | 2007.27   | 0.00  | 2007.27        | 0.0000         |
| 3600.00 | 2007.19   | 2007.19   | 0.00  | 2007.19        | 0.0000         |
| 3656.46 | 2006.92   | 2006.92   | 0.00  | 2006.92        | 0.0000         |

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer: \_\_\_\_\_  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



**PLANS NOT APPROVED BY AGENCY**

DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD89)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: N/A  
 VERTICAL: N/A

PROJ #: 13-1166  
 DATE: 07/19/18  
 DRAWN: JPP  
 REVIEWED: TRW

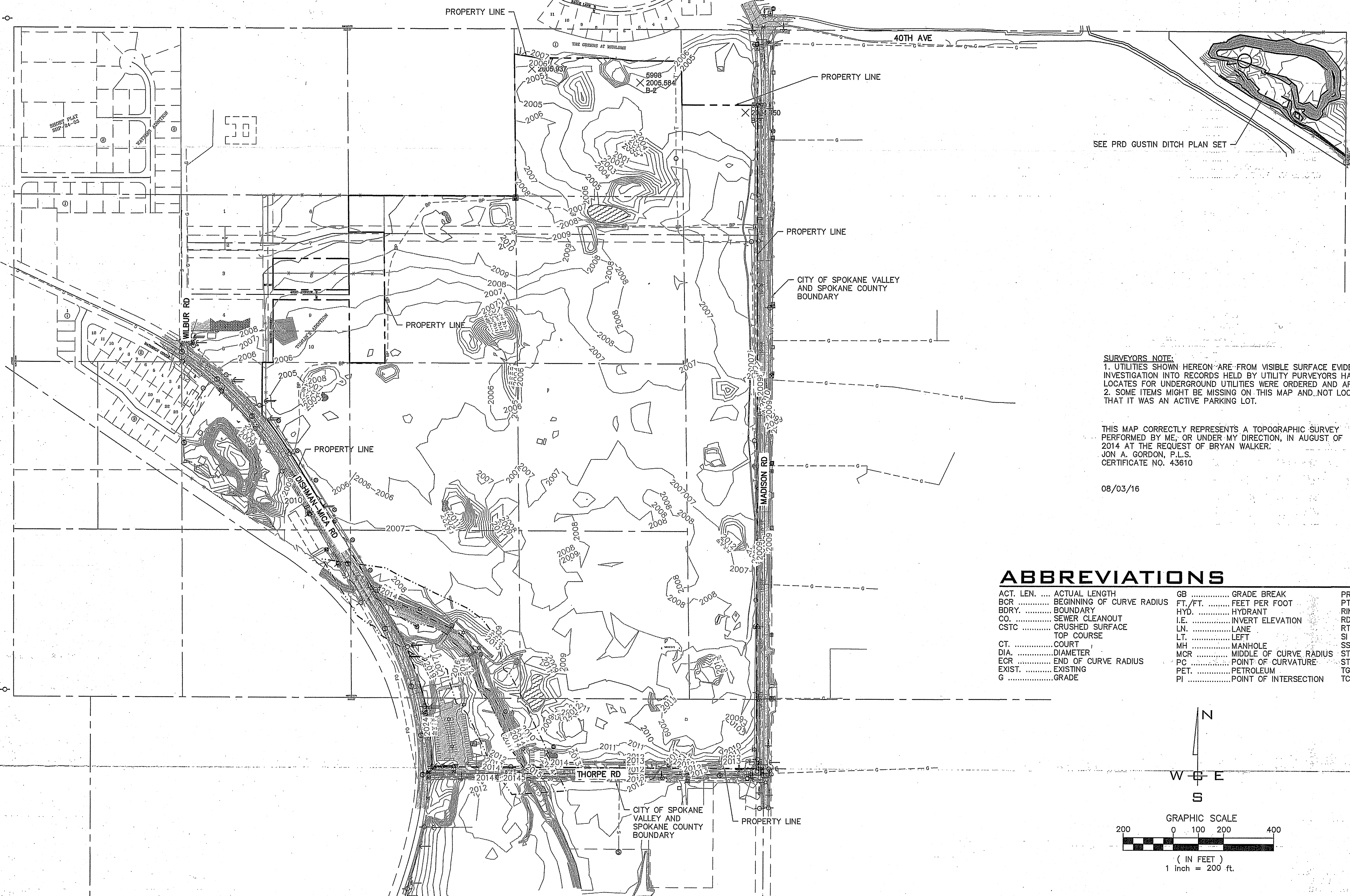


**SPOKANE VALLEY PAINTED HILLS PRD**  
**THORPE RD & MADISON RD X-SECTIONS**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C0.3**  
 JOB NUMBER 13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG



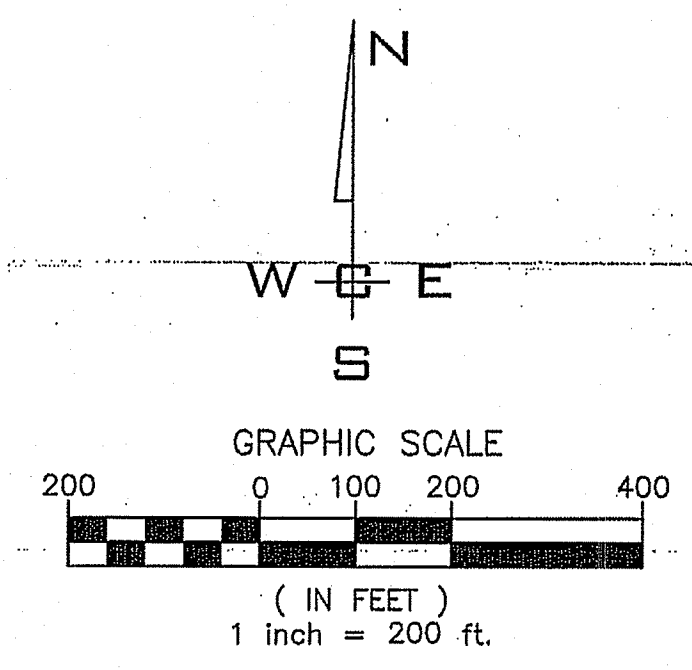
**SURVEYORS NOTE:**  
 1. UTILITIES SHOWN HEREON ARE FROM VISIBLE SURFACE EVIDENCE COLLECTED BY SURVEY. INVESTIGATION INTO RECORDS HELD BY UTILITY PURVEYORS HAS NOT BEEN PERFORMED. LOCATES FOR UNDERGROUND UTILITIES WERE ORDERED AND ARE SHOWN ON THIS MAP.  
 2. SOME ITEMS MIGHT BE MISSING ON THIS MAP AND NOT LOCATED DUE TO THE FACT THAT IT WAS AN ACTIVE PARKING LOT.

THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY PERFORMED BY ME, OR UNDER MY DIRECTION, IN AUGUST OF 2014 AT THE REQUEST OF BRYAN WALKER.  
 JON A. GORDON, P.L.S.  
 CERTIFICATE NO. 43610

08/03/16

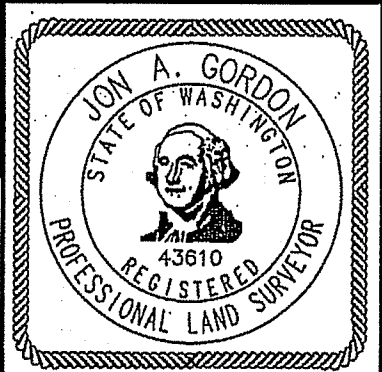
**ABBREVIATIONS**

|                                     |                                  |                                  |
|-------------------------------------|----------------------------------|----------------------------------|
| ACT. LEN. .... ACTUAL LENGTH        | GB ..... GRADE BREAK             | PRC ..... POINT OF REVERSE CURVE |
| BCR ..... BEGINNING OF CURVE RADIUS | FT./FT. .... FEET PER FOOT       | PT ..... POINT OF TANGENCY       |
| BDRY. .... BOUNDARY                 | HYD. .... HYDRANT                | RIM EL. .... RIM ELEVATION       |
| CO. .... SEWER CLEANOUT             | I.E. .... INVERT ELEVATION       | RD ..... ROAD                    |
| CSTC ..... CRUSHED SURFACE          | LN. .... LANE                    | RT. .... RIGHT                   |
| CT. .... COURT                      | LT. .... LEFT                    | SI ..... STREET INTERSECTION     |
| DIA. .... DIAMETER                  | MH ..... MANHOLE                 | SS ..... SANITARY SEWER          |
| ECR ..... END OF CURVE RADIUS       | MCR ..... MIDDLE OF CURVE RADIUS | STA. .... STATION                |
| EXIST. .... EXISTING                | PC ..... POINT OF CURVATURE      | STA. LEN. .... STATION LENGTH    |
| G ..... GRADE                       | PET. .... PETROLEUM              | TC ..... TOP OF CURVE            |
|                                     | PI ..... POINT OF INTERSECTION   | TC ..... TOP OF CURVE            |



(REFERENCE ONLY)

**PLANS NOT APPROVED BY AGENCY**



**DATUM: NAVD - 88**  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1"=200'  
 VERTICAL:  
 N/A

**PROJ #:** 13-1166  
**DATE:** 07/19/18  
**DRAWN:** JPP  
**REVIEWED:** TRW

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2528 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-693-2617 FAX: 509-626-0227

**SPOKANE VALLEY PAINTED HILLS PRD OVERALL TOPOGRAPHY**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C1.0**  
 JOB NUMBER  
**13-1166**

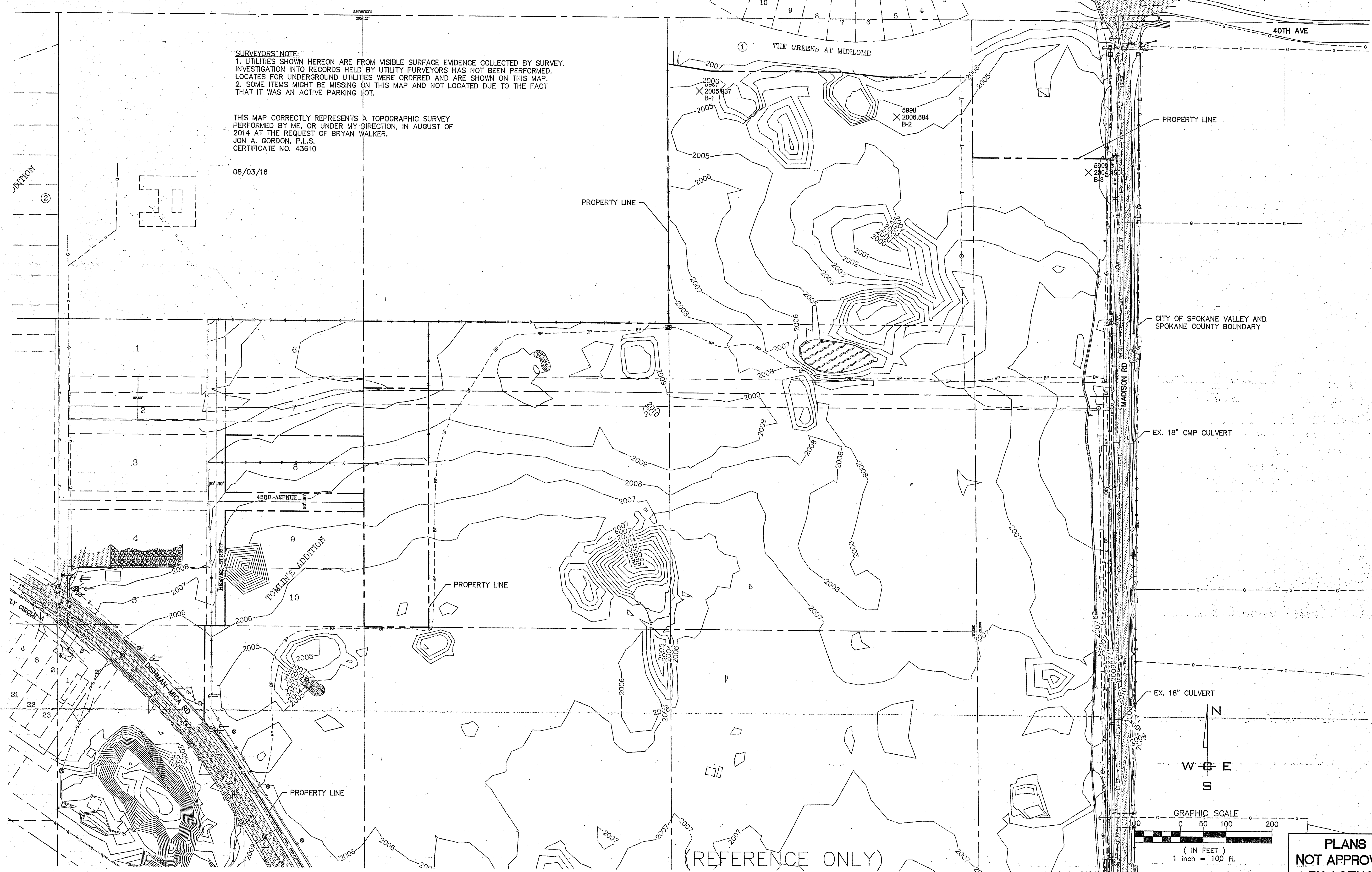
SE $\frac{1}{4}$ , SEC.33, T.25N., R.44E., W.M.  
 SW $\frac{1}{4}$ , SEC.34, T.25N., R.44E., W.M.  
 NE $\frac{1}{4}$ , SEC. 4, T.24N., R.44E., W.M.

**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG

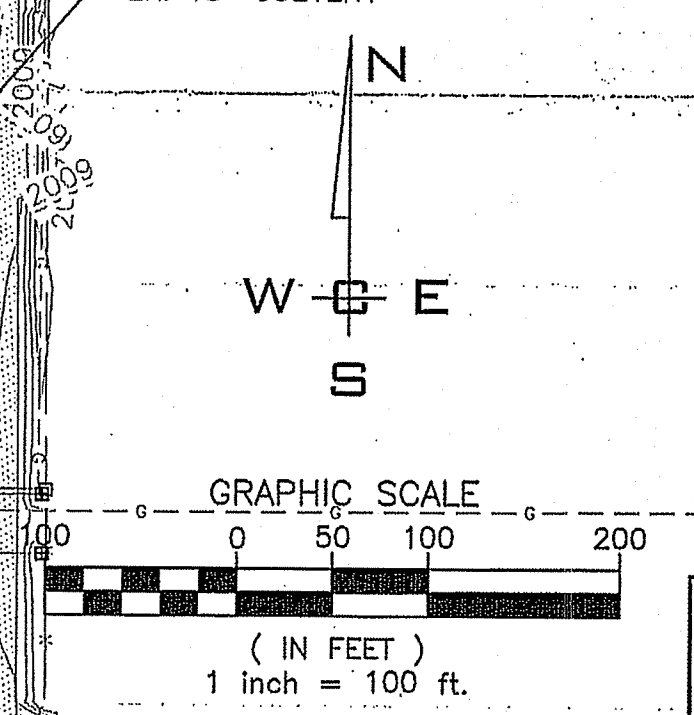
**SURVEYORS' NOTE:**  
 1. UTILITIES SHOWN HEREON ARE FROM VISIBLE SURFACE EVIDENCE COLLECTED BY SURVEY. INVESTIGATION INTO RECORDS HELD BY UTILITY PURVEYORS HAS NOT BEEN PERFORMED. LOCATES FOR UNDERGROUND UTILITIES WERE ORDERED AND ARE SHOWN ON THIS MAP.  
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THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY PERFORMED BY ME, OR UNDER MY DIRECTION, IN AUGUST OF 2014 AT THE REQUEST OF BRYAN WALKER.  
 JON A. GORDON, P.L.S.  
 CERTIFICATE NO. 43610

08/03/16

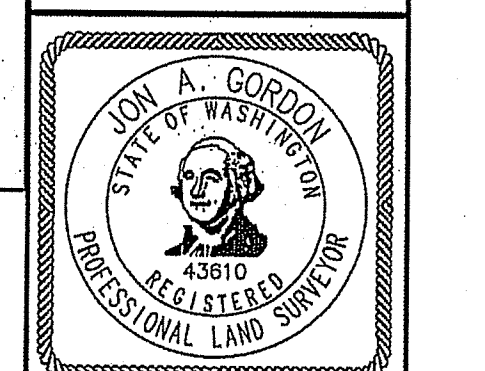


(REFERENCE ONLY)



City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)  
 City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



**PLANS NOT APPROVED BY AGENCY**

DATUM: NAVD - 88  
 TBM 8-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | ORIGINAL PREPARATION | REVISIONS |
|-----|----------|-----|----------------------|-----------|
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |           |

**SCALE:**  
 HORIZONTAL:  
 1"=100'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 07/19/18  
 DRAWN: JPP  
 REVIEWED: TRW

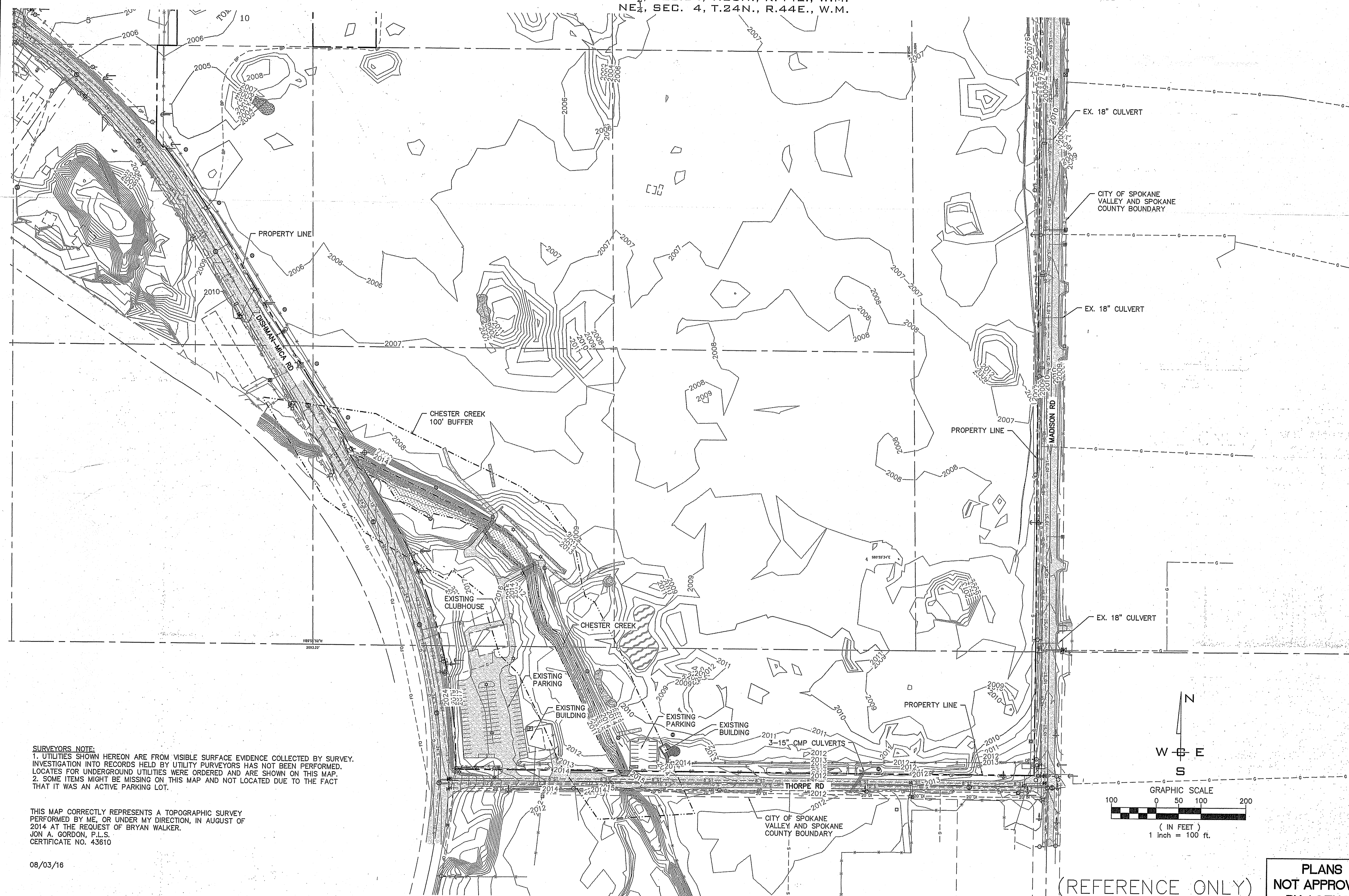
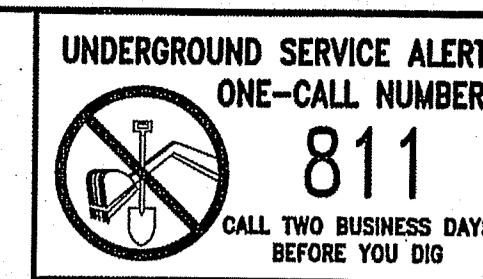
- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER



**SPOKANE VALLEY PAINTED HILLS PRD NORTH TOPOGRAPHY MAP**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C1.1**  
 JOB NUMBER 13-1166

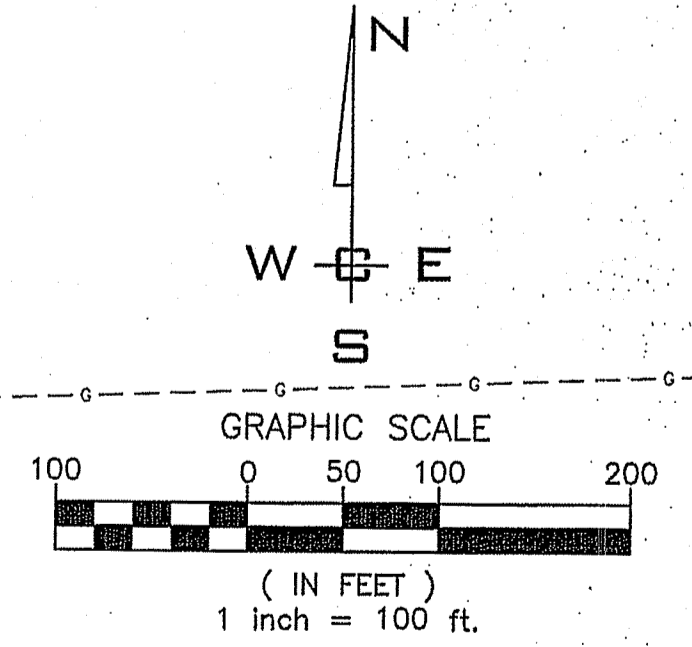
SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**SURVEYORS NOTE:**  
 1. UTILITIES SHOWN HEREON ARE FROM VISIBLE SURFACE EVIDENCE COLLECTED BY SURVEY. INVESTIGATION INTO RECORDS HELD BY UTILITY PURVEYORS HAS NOT BEEN PERFORMED. LOCATES FOR UNDERGROUND UTILITIES WERE ORDERED AND ARE SHOWN ON THIS MAP.  
 2. SOME ITEMS MIGHT BE MISSING ON THIS MAP AND NOT LOCATED DUE TO THE FACT THAT IT WAS AN ACTIVE PARKING LOT.

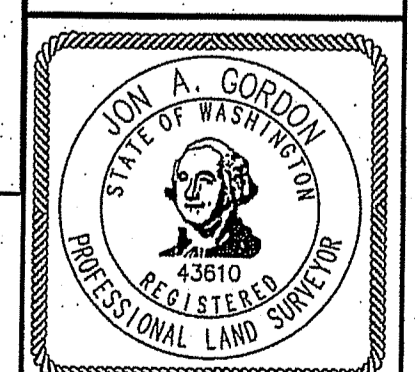
THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY PERFORMED BY ME, OR UNDER MY DIRECTION, IN AUGUST OF 2014 AT THE REQUEST OF BRYAN WALKER.  
 JON A. GORDON, P.L.S.  
 CERTIFICATE NO. 43610

08/03/16



City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)  
 City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public:  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted:  
 Acceptance Comments:



(REFERENCE ONLY)

PLANS NOT APPROVED BY AGENCY

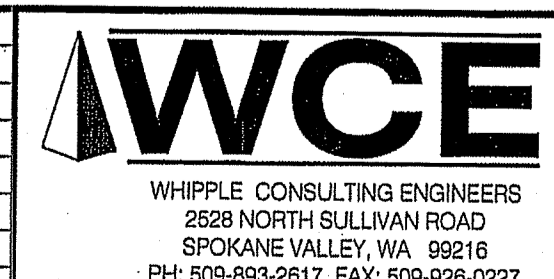
DATUM: NAVD - 88  
 TBM 6-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.67 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1"=100'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 07/19/18  
 DRAWN: JPP  
 REVIEWED: TRW

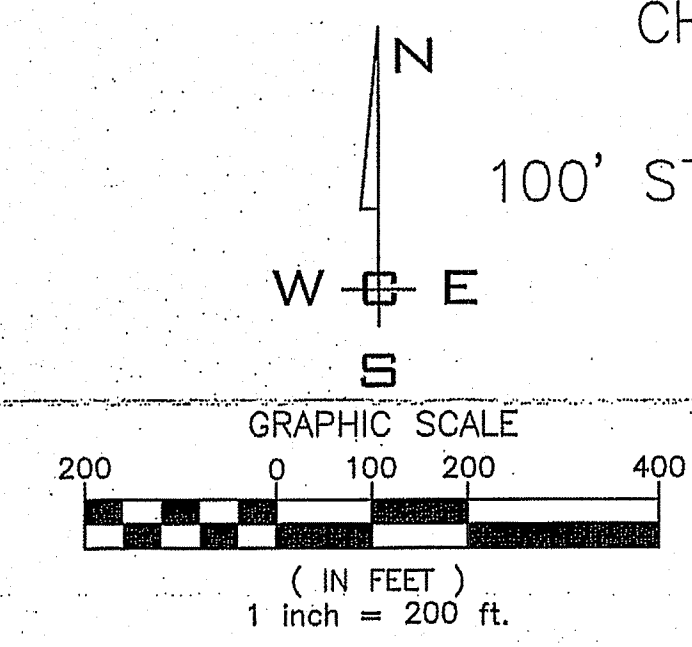
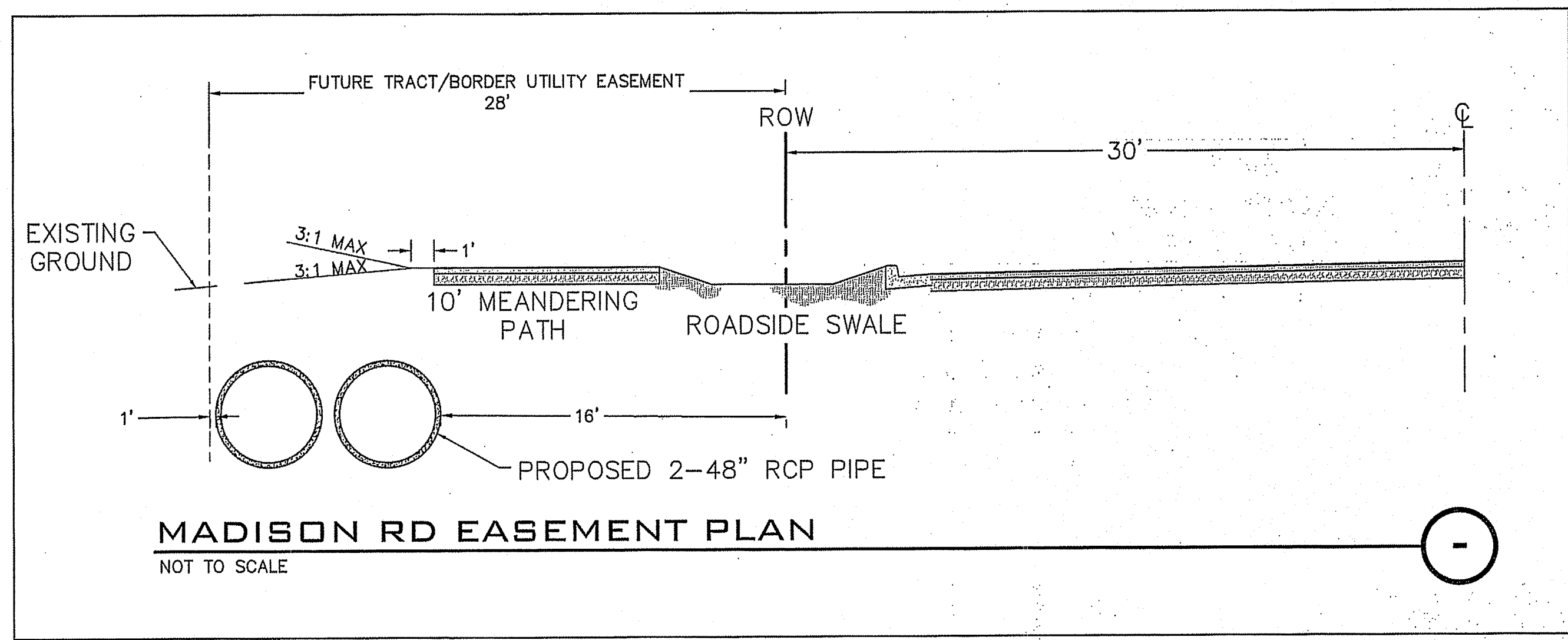
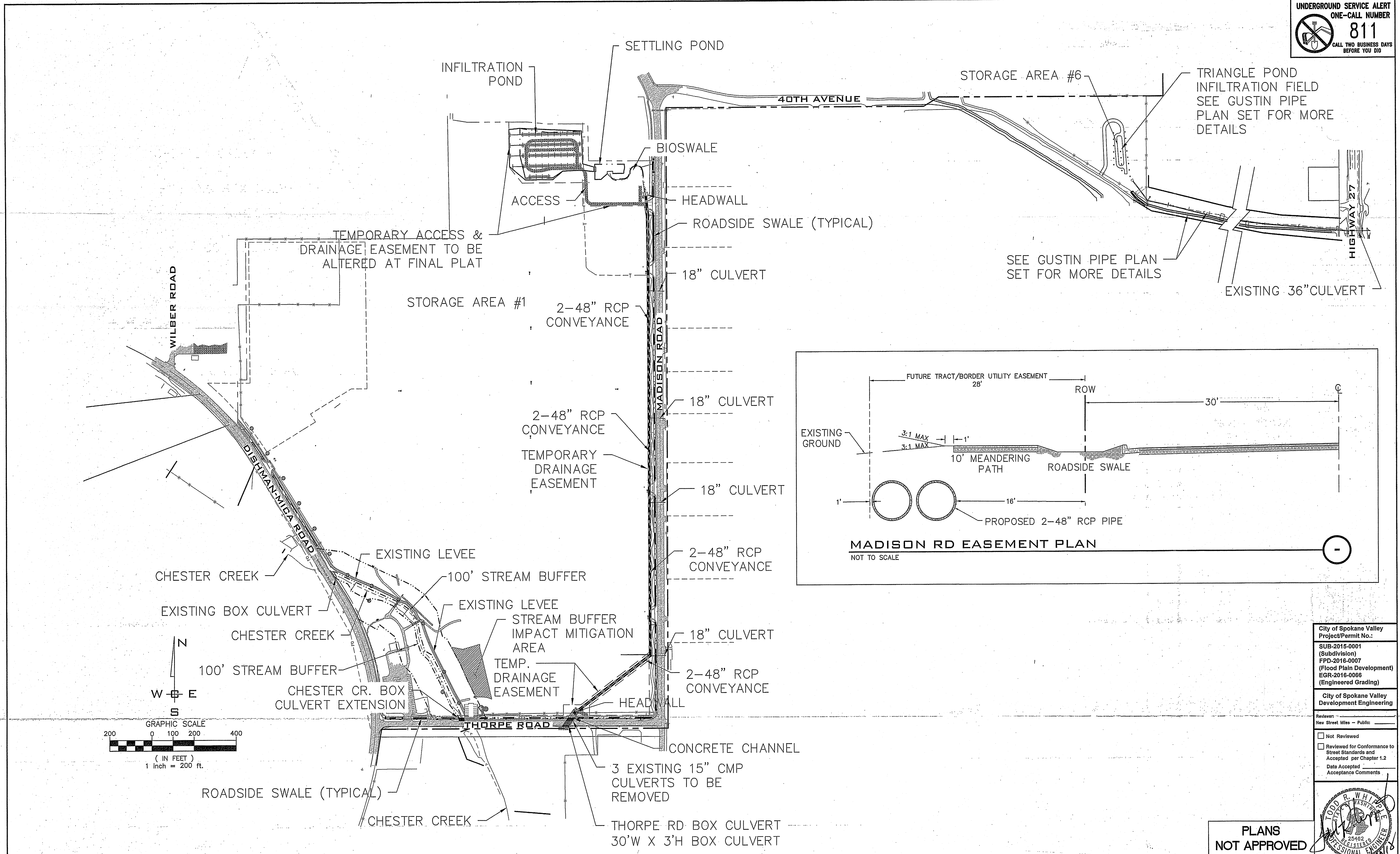
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| <input type="checkbox"/>            | STRUCTURAL |
| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |



**SPOKANE VALLEY PAINTED HILLS PRD SOUTH TOPOGRAPHY MAP**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C1.2**  
 JOB NUMBER 13-1166



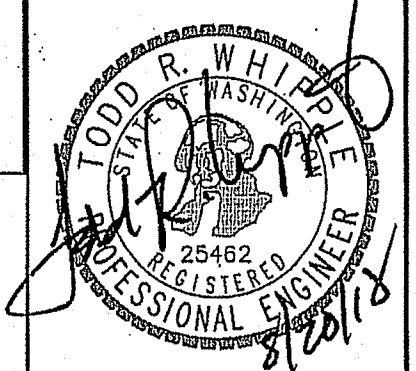


City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0065  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewers:  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted \_\_\_\_\_  
 Acceptance Comments \_\_\_\_\_



**PLANS  
 NOT APPROVED  
 BY AGENCY**

DATUM: NAVD - 88  
 TBM 8-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67  
 (NAVD89) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1" = 200'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

|                                     |            |
|-------------------------------------|------------|
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| <input type="checkbox"/>            | STRUCTURAL |
| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |

**IWCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2526 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2617 FAX: 509-926-0227

**SPOKANE VALLEY PAINTED HILLS PRD  
 SITE ELEMENT PLAN  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET  
 C1.3**  
 JOB NUMBER  
**13-1166**

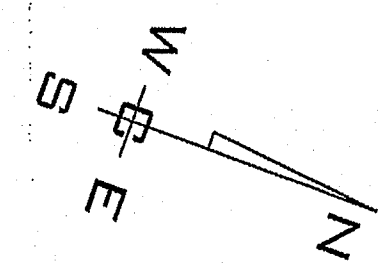
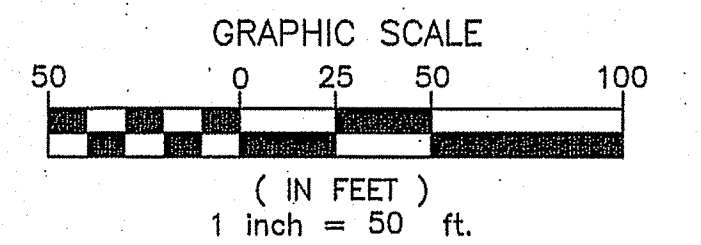
SE 1/4, SEC. 33, T.25N., R.44E., W.M.  
 SW 1/4, SEC. 34, T.25N., R.44E., W.M.  
 NE 1/4, SEC. 4, T.24N., R.44E., W.M.

SEE SHEET C10.0 FOR SIGNING AND STRIPING PLAN.

**TAPER CALCULATIONS**

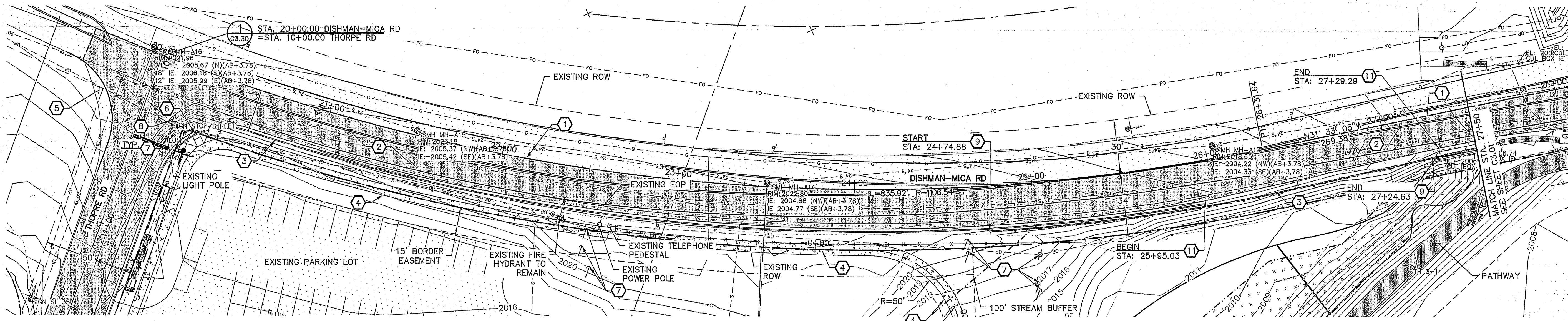
L= WS  
 L= 3(45)'= 135'

**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



**CONSTRUCTION NOTES**

- 1 SAWCUT AT CENTERLINE AND REMOVE EXISTING ASPHALT. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
- 2 CONSTRUCT ROAD WIDENING PER TYPICAL SECTIONS. SEE SHEET CO.2.
- 3 PROVIDE AND INSTALL TYPE B SPILL CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 4 PROVIDE AND INSTALL 6' WIDE CONCRETE SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
- 5 REMOVE EXISTING ASPHALT.
- 6 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
- 7 RELOCATE EXISTING UTILITIES TO 2' MINIMUM BEHIND PROPOSED CURB PER STANDARD PLAN U-101. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.
- 8 EXISTING SIGN TO BE RELOCATED TO MAINTAIN 2' OF CLEARANCE FROM BACK OF CURB PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE SHEET C10.0 FOR DETAILS.
- 9 REMOVE EXISTING GUARDRAIL. REPLACE WITH NEW GUARDRAIL 2' BEHIND PROPOSED CURB PER WSDOT STANDARD SPECIFICATIONS SECTION 8-11.
- 10 RESERVED.
- 11 TAPER TO MATCH EXISTING ASPHALT.



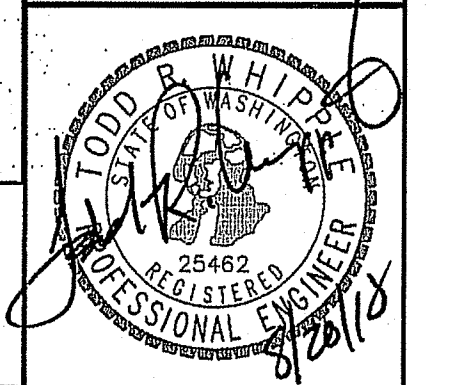
SEE SHEET C3.03 FOR SIDEWALK LOCATION DETAILS

|             |                                  |   |                                  |                                  |                                  |  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |        |             |
|-------------|----------------------------------|---|----------------------------------|----------------------------------|----------------------------------|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------|-------------|
|             | STA = 20+00.00<br>ELEV = 2022.60 | STA = 20+50.00<br>ELEV = 2022.76                | STA = 21+00.00<br>ELEV = 2023.11 | STA = 21+50.00<br>ELEV = 2023.38 | STA = 22+00.00<br>ELEV = 2023.50 | STA = 22+50.00<br>ELEV = 2023.52       | STA = 23+00.00<br>ELEV = 2023.33 | STA = 23+50.00<br>ELEV = 2022.97 | STA = 24+00.00<br>ELEV = 2022.51 | STA = 24+50.00<br>ELEV = 2021.94 | STA = 25+00.00<br>ELEV = 2021.13 | STA = 25+50.00<br>ELEV = 2020.08 | STA = 26+00.00<br>ELEV = 2019.00 | STA = 26+50.00<br>ELEV = 2017.67 | STA = 27+00.00<br>ELEV = 2016.06 |        |             |
| 2030        |                                  |   |                                  |                                  |                                  |  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  | 2030   |             |
| Q/SAWCUT    | -1.44%                           | 0.32%   | 0.66%                            | 0.53%                            | 0.25%                            | 0.04%                                  | -0.37%                           | -0.72%                           | -0.93%                           | -1.15%                           | -1.62%                           | -2.10%                           | -2.16%                           | -2.65%                           | -3.18%                           | -2.72% | Q/SAWCUT    |
| 2020        |                                  |   |                                  |                                  |                                  |  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |        | 2020        |
| 2010        |                                  | END CURB PT<br>STA = 20+59.27<br>ELEV = 2024.52 | STA = 21+00.00<br>ELEV = 2024.79 | STA = 21+50.00<br>ELEV = 2025.02 | STA = 22+00.00<br>ELEV = 2025.18 | STA = 22+50.00<br>ELEV = 2025.16       | STA = 23+00.00<br>ELEV = 2024.99 | STA = 23+50.00<br>ELEV = 2024.61 | STA = 24+00.00<br>ELEV = 2024.11 | STA = 24+50.00<br>ELEV = 2023.53 | STA = 25+00.00<br>ELEV = 2022.19 | STA = 25+50.00<br>ELEV = 2021.15 | STA = 26+00.00<br>ELEV = 2020.40 | STA = 26+50.00<br>ELEV = 2018.72 | STA = 27+00.00<br>ELEV = 2016.75 |        | 2010        |
| 2030        |                                  |   |                                  |                                  |                                  |  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |        | 2030        |
| TOP OF CURB |                                  |   | 0.66%                            | 0.46%                            | 0.32%                            | 0.00%                                  | -0.38%                           | -0.76%                           | -1.00%                           | -1.16%                           | -2.67%                           | -2.09%                           | -1.49%                           | -3.36%                           | -3.94%                           |        | TOP OF CURB |
| 24' RT      |                                  |   |                                  |                                  |                                  |  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |        | 24' RT      |
| 2020        |                                  |   |                                  |                                  |                                  |  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |        | 2020        |
| 2010        |                                  |   |                                  |                                  |                                  | SEE WIDENING SPREADSHEET ON SHEET CO.2 |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |        | 2010        |
|             | 20+00                            | 21+00   | 22+00                            | 23+00                            | 24+00                            | 25+00                                  | 26+00                            | 27+00                            |                                  |                                  |                                  |                                  |                                  |                                  |                                  |        |             |

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Revised:  
 New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



**PLANS NOT APPROVED BY AGENCY**

DATUM: NAVD - 88  
 TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

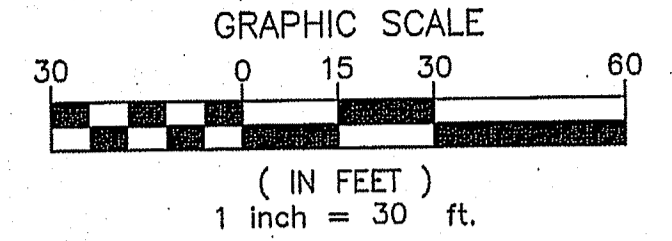
**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2828 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-895-2817 FAX: 509-928-9227

**SPOKANE VALLEY PAINTED HILLS PRD**  
**DISHMAN-MICA PLAN & PROFILE**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C3.00**  
 JOB NUMBER 13-1166

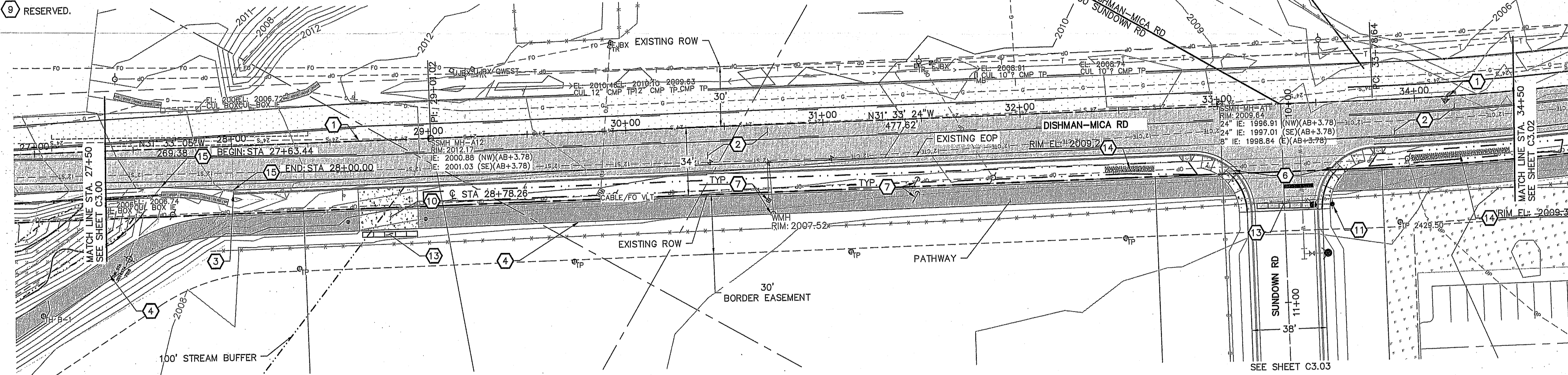
SE $\frac{1}{4}$ , SEC. 33, T. 25N., R. 44E., W.M.  
 SW $\frac{1}{4}$ , SEC. 34, T. 25N., R. 44E., W.M.  
 NE $\frac{1}{4}$ , SEC. 4, T. 24N., R. 44E., W.M.

SEE SHEETS C10.0 FOR SIGNING AND STRIPING PLAN.



**CONSTRUCTION NOTES**

- 1 SAWCUT AT CENTERLINE AND REMOVE EXISTING ASPHALT. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
- 2 CONSTRUCT ROAD WIDENING PER TYPICAL SECTIONS. SEE SHEET C0.2.
- 3 PROVIDE AND INSTALL TYPE B SPILL CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 4 PROVIDE AND INSTALL 10' WIDE ASPHALT PATHWAY. 2" HMA CLASS 3-4" CSTC ON 92% COMPACTED SUBGRADE.
- 5 RESERVED.
- 6 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
- 7 RELOCATE EXISTING UTILITIES TO 2' MINIMUM BEHIND PROPOSED CURB PER STANDARD PLAN U-101. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.
- 8 RESERVED.
- 9 RESERVED.
- 10 PROVIDE AND INSTALL 30' WIDE TYPE II COMMERCIAL DRIVEWAY PER SPOKANE VALLEY STANDARD PLAN R-111, WITHOUT SIDEWALK.
- 11 PROVIDE AND INSTALL L.E.D. STREET LIGHT (EQUIVARIANT OF A 300W HIGH PRESSURE SODIUM LIGHT) LOCATED ON WOODEN POLE COORDINATE FINAL LOCATION AND POWER SUPPLY WITH INLAND POWER.
- 12 RESERVED.
- 13 PROVIDE AND INSTALL TYPE III BARRICADES PER CITY OF SPOKANE VALLEY STANDARD PLAN R-142 AT EACH APPROACH UNTIL APPROACH IS OPERATIONAL.
- 14 PROVIDE AND INSTALL CATCH BASIN AND INFILTRATION GALLERY PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE DETAILS 3 AND 4 ON SHEET C3.12 FOR INFILTRATION GALLERY INSTALLATION. SEE PLAN VIEW FOR RIM ELEVATIONS.
- 15 TAPER TO MATCH EXISTING ASPHALT.



| Station | 2020 Profile                     | 2010 Profile | 2000 Profile                                 | Notes             |
|---------|----------------------------------|--------------|--|-------------------|
| 27+00   | STA = 28+00.00<br>ELEV = 2013.51 | -2.37%       | END CURB<br>STA = 28+00.00<br>ELEV = 2014.18 |                   |
| 28+00   | STA = 28+50.00<br>ELEV = 2012.73 | -1.56%       | STA = 28+50.00<br>ELEV = 2013.26             |                   |
| 29+00   | STA = 29+00.00<br>ELEV = 2011.94 | -1.58%       | STA = 29+00.00<br>ELEV = 2012.49             |                   |
| 29+50   | STA = 29+50.00<br>ELEV = 2011.41 | -1.91%       | STA = 29+50.00<br>ELEV = 2011.51             |                   |
| 30+00   | STA = 30+00.00<br>ELEV = 2010.77 | -0.56%       | STA = 30+00.00<br>ELEV = 2011.33             |                   |
| 30+50   | STA = 30+50.00<br>ELEV = 2010.47 | -0.60%       | STA = 30+50.00<br>ELEV = 2010.92             |                   |
| 31+00   | STA = 31+00.00<br>ELEV = 2010.20 | -0.41%       | STA = 31+00.00<br>ELEV = 2010.65             |                   |
| 31+50   | STA = 31+50.00<br>ELEV = 2010.07 | -0.26%       | STA = 31+50.00<br>ELEV = 2010.56             |                   |
| 32+00   | STA = 32+00.00<br>ELEV = 2009.82 | -0.50%       | STA = 32+00.00<br>ELEV = 2010.00             |                   |
| 32+50   | STA = 32+50.00<br>ELEV = 2009.71 | -0.23%       | STA = 32+50.00<br>ELEV = 2009.90             |                   |
| 33+00   | STA = 32+85.69<br>ELEV = 2009.45 | -0.79%       | STA = 32+85.69<br>ELEV = 2009.83             | PT<br>CURB RETURN |
| 33+50   | STA = 33+50.00<br>ELEV = 2009.20 | -0.35%       | STA = 33+50.00<br>ELEV = 2010.14             |                   |
| 34+00   | STA = 34+50.00<br>ELEV = 2008.85 | -0.35%       | STA = 34+50.00<br>ELEV = 2010.11             |                   |
| 34+50   | STA = 34+50.00<br>ELEV = 2008.85 | -0.35%       | STA = 34+50.00<br>ELEV = 2010.10             |                   |
| 35+00   |                                  | -0.35%       |  |                   |

SEE WIDENING SPREADSHEET ON SHEET C0.2

PLANS NOT APPROVED BY AGENCY

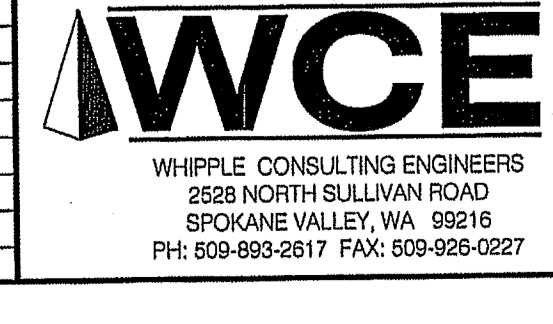
DATUM: NAVD - 88  
 TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.87 (NAVD89) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

SCALE:  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER



**SPOKANE VALLEY PAINTED HILLS PRD  
 DISHMAN-MICA PLAN & PROFILE  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer: \_\_\_\_\_  
 New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



**SHEET C3.01**  
 JOB NUMBER 13-1166

SE $\frac{1}{4}$ , SEC.33, T.25N., R.44E., W.M.  
 SW $\frac{1}{4}$ , SEC.34, T.25N., R.44E., W.M.  
 NE $\frac{1}{4}$ , SEC. 4, T.24N., R.44E., W.M.

SEE SHEETS C10.0 FOR SIGNING AND STRIPING PLAN.

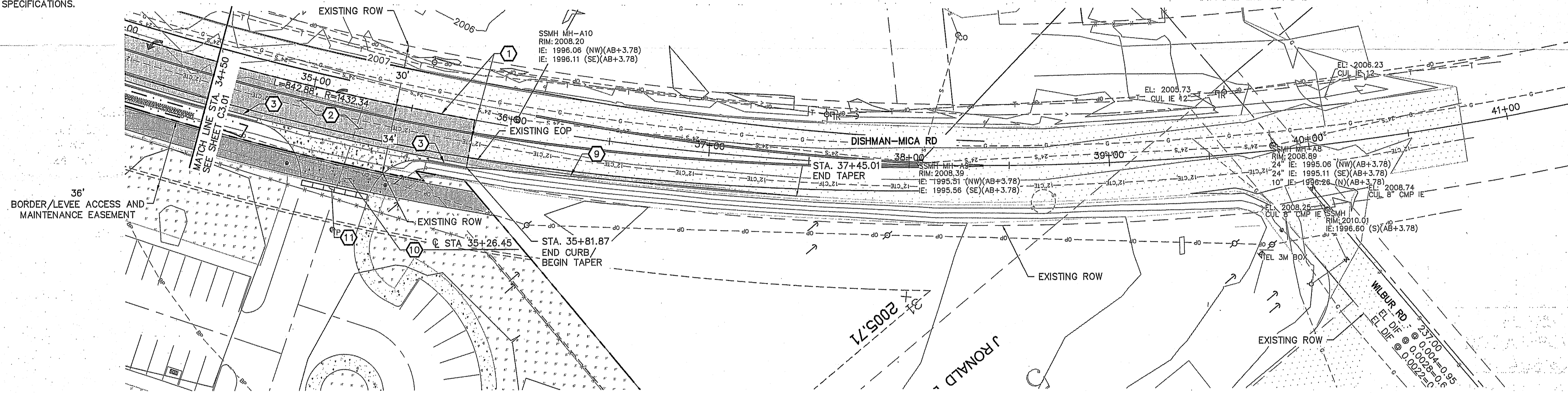
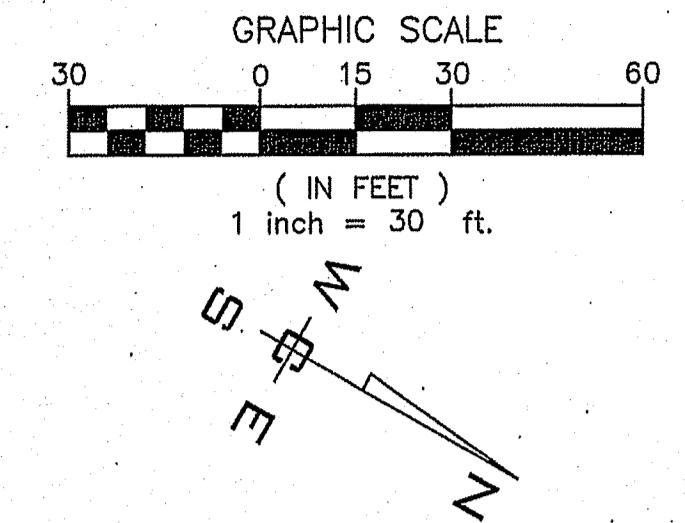
**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER 811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG

**CONSTRUCTION NOTES**

- 1 SAWCUT AT CENTERLINE AND REMOVE EXISTING ASPHALT, TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
- 2 CONSTRUCT ROAD WIDENING PER TYPICAL SECTIONS. SEE SHEET C0.2.
- 3 PROVIDE AND INSTALL TYPE B SPILL CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 4 PROVIDE AND INSTALL 10' WIDE ASPHALT PATHWAY, 2" HMA CLASS  $\frac{3}{4}$ "-4" CSTC ON 92% COMPACTED SUBGRADE.
- 5 RESERVED.
- 6 RESERVED.
- 7 RELOCATE EXISTING UTILITIES TO 2' MINIMUM BEHIND PROPOSED CURB PER STANDARD PLAN U-101. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.
- 8 EXISTING SIGN TO BE RELOCATED TO MAINTAIN 2' OF CLEARANCE FROM BACK OF CURB PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 9 PROVIDE 220.5' TAPER FROM FACE OF PROPOSED CURB TO EXISTING EDGE OF ASPHALT PER TAPER CALCULATIONS, THIS SHEET.
- 10 PROVIDE AND INSTALL 33' TYPE II COMMERCIAL DRIVEWAY PER SPOKANE VALLEY STANDARD PLAN R-111. DRIVEWAY TO INCLUDE RIGHT-IN RIGHT-OUT TO BE DESIGNED AND INSTALLED AT TIME OF DRIVEWAY EXTENSION.
- 11 PROVIDE AND INSTALL TYPE III BARRICADES PER CITY OF SPOKANE VALLEY STANDARD PLAN R-142 AT EACH APPROACH UNTIL APPROACH IS OPERATIONAL.

**TAPER CALCULATIONS**

L = WS  
 L = 3.88(45') = 175'



| Station  | Profile Description | 2020 Elevation | 2010 Elevation | 2000 Elevation |
|----------|---------------------|----------------|----------------|----------------|
| 34+00    | Q/SAWCUT            | 2010.10        |                |                |
| 34+50.00 | TOP OF CURB 24' RT  | 2010.10        | 2008.85        | 2008.85        |
| 34+76.60 | PT CURB RETURN      | 2010.10        | 2008.76        | 2008.76        |
| 35+00    |                     | 2010.10        | 2008.54        | 2008.54        |
| 35+26.45 | Q DRIVEWAY          | 2010.20        |                |                |
| 35+50.00 | TOP OF CURB 24' RT  | 2010.20        | 2008.49        | 2008.49        |
| 36+00    |                     | 2010.20        | 2008.39        | 2008.39        |
| 36+50.00 | TOP OF CURB 24' RT  | 2010.28        | 2008.40        | 2008.40        |
| 37+00    |                     | 2010.28        | 2008.46        | 2008.46        |
| 37+50.00 | TOP OF CURB 24' RT  | 2010.28        | 2008.58        | 2008.58        |
| 38+00    |                     | 2010.28        | 2008.55        | 2008.55        |
| 38+50.00 | TOP OF CURB 24' RT  | 2010.28        | 2008.70        | 2008.70        |
| 39+00    |                     | 2010.28        | 2008.90        | 2008.90        |
| 39+50.00 | TOP OF CURB 24' RT  | 2010.28        |                |                |
| 40+00    | Q/SAWCUT            |                |                |                |

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

| SCALE:      |        |
|-------------|--------|
| HORIZONTAL: | 1"=30' |
| VERTICAL:   | 1"=10' |

|           |          |
|-----------|----------|
| PROJ #:   | 13-1166  |
| DATE:     | 08/14/18 |
| DRAWN:    | JPP      |
| REVIEWED: | TRW      |

|                                     |            |
|-------------------------------------|------------|
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| <input type="checkbox"/>            | STRUCTURAL |
| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |

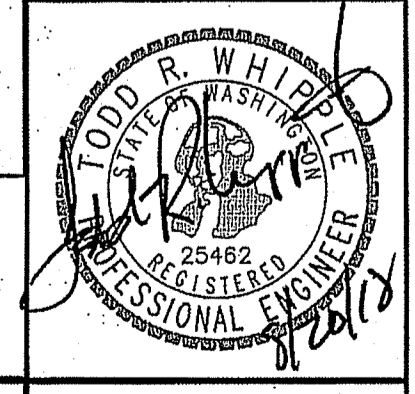
DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

SEE WIDENING SPREADSHEET ON SHEET C0.2

PLANS NOT APPROVED BY AGENCY

City of Spokane Valley  
 Project/Permit No.: SUB-2015-0001 (Subdivision) FPD-2016-0007 (Flood Plain Development) EGR-2016-0066 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewed: New Street Miles - Public:  Not Reviewed  Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted:   
 Acceptance Comments:   


**SPOKANE VALLEY PAINTED HILLS PRD**  
**DISHMAN-MICA PLAN & PROFILE**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

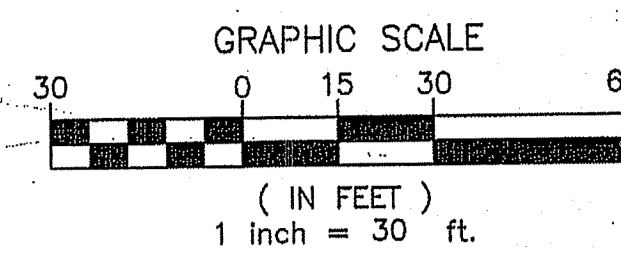
**IWCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2522 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2817 FAX: 509-926-0227

**SHEET C3.02**  
 JOB NUMBER  
**13-1166**

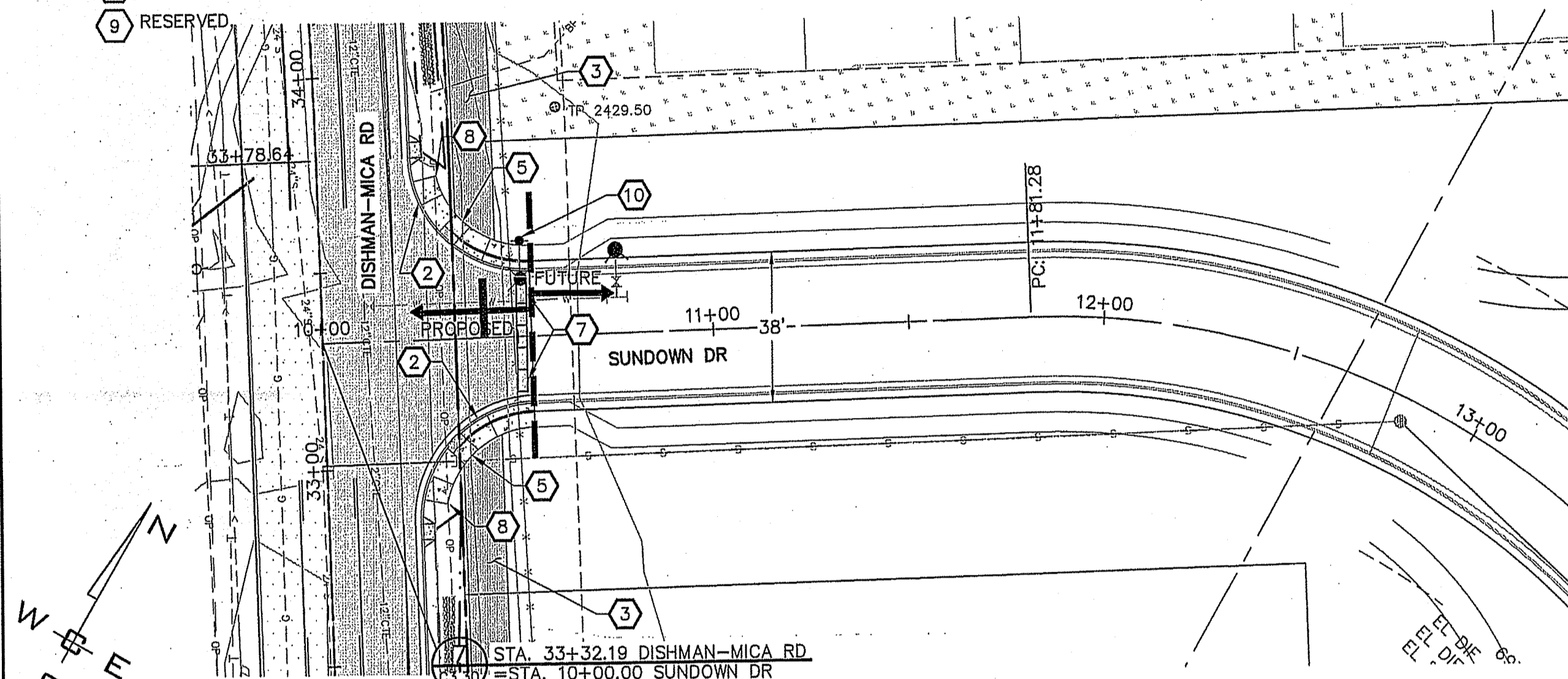
**CONSTRUCTION NOTES**

- 1 RESERVED.
- 2 PROVIDE AND INSTALL TYPE B CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 3 PROVIDE AND INSTALL 10' WIDE ASPHALT PATHWAY. 2" HMA CLASS 1/2"-4" CSTC ON 92% COMPACTED SUBGRADE.
- 4 RESERVED.
- 5 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
- 6 RELOCATE EXISTING UTILITIES TO 2' MINIMUM BEHIND PROPOSED CURB PER STANDARD PLAN U-101. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.
- 7 PROVIDE AND INSTALL TYPE III BARRICADES PER CITY OF SPOKANE VALLEY STANDARD PLAN R-142 AT EACH APPROACH UNTIL ROADWAY IS OPERATIONAL.
- 8 PROVIDE AND INSTALL 6' SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
- 9 RESERVED.
- 10 PROVIDE AND INSTALL L.E.D. STREET LIGHT (EQUIVANT OF A 300W HIGH PRESSURE SODIUM LIGHT) LOCATED ON WOODEN POLE COORDINATE FINAL LOCATION AND POWER SUPPLY WITH INLAND POWER.
- 11 PROVIDE AND INSTALL RECTANGULAR RAPID FLASH BEACON, CROSSWALK WARNING SYSTEM. THE SYSTEM TO INCLUDE SOLAR POWER SOURCE, WIRELESS COORDINATION, PEDESTRIAN ACTIVATED PUSH BUTTONS, L.E.D. BEACONS, AND APPROPRIATE MUTCD CROSSWALK SIGNS. SYSTEM TO BE INSTALLED WITH OPENING OF SUNDOWN DRIVE TO MOTORING PUBLIC.
- 12 RESERVED.

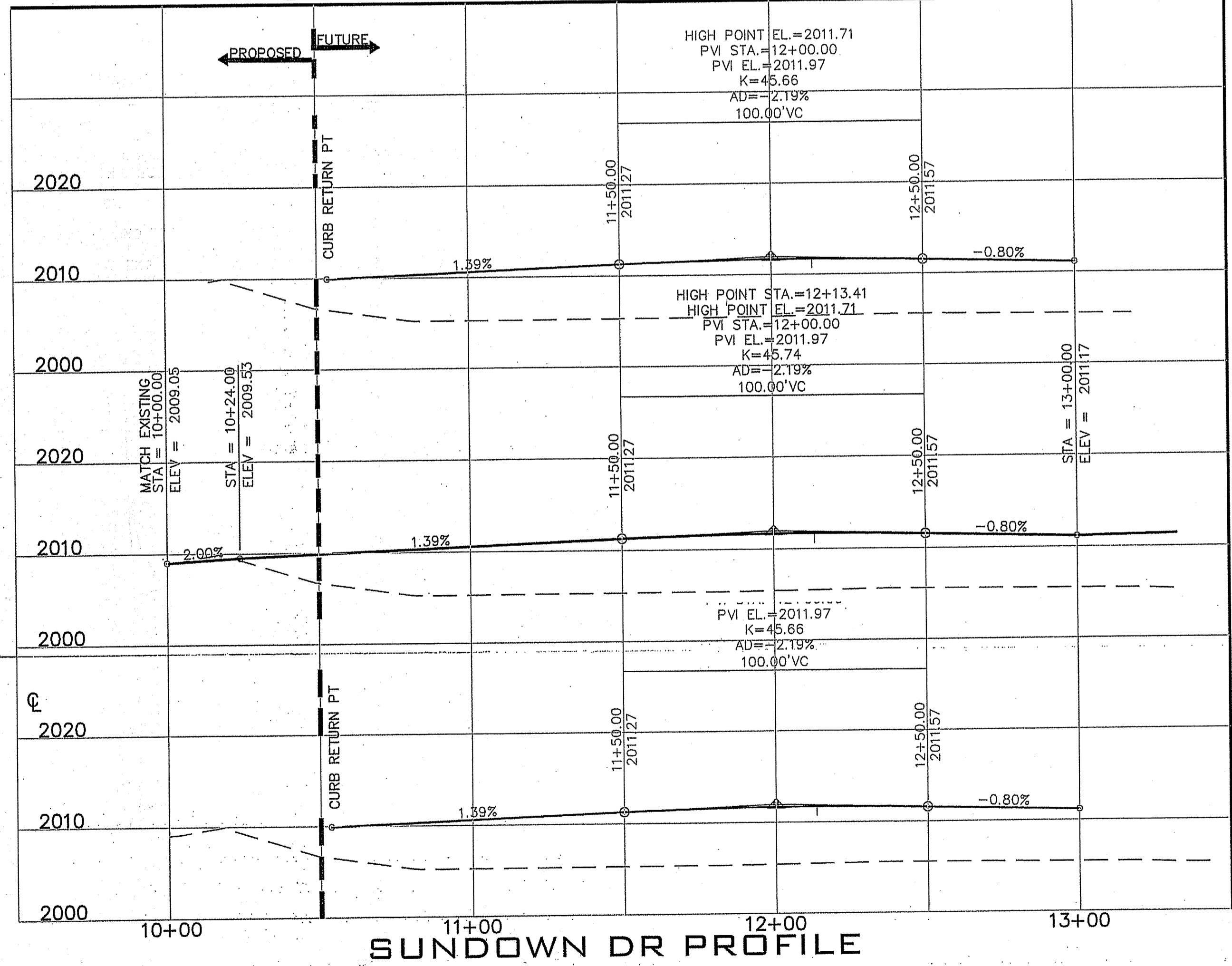
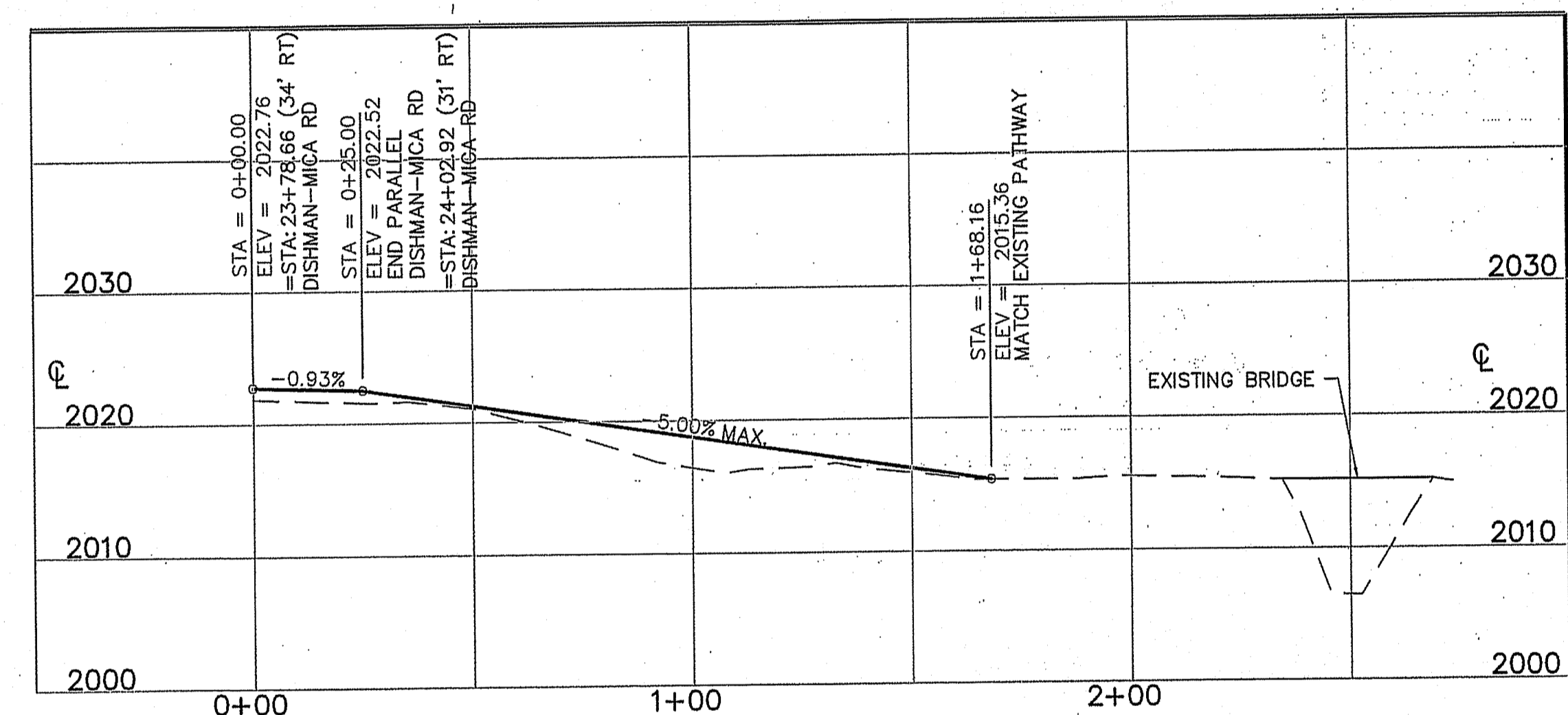
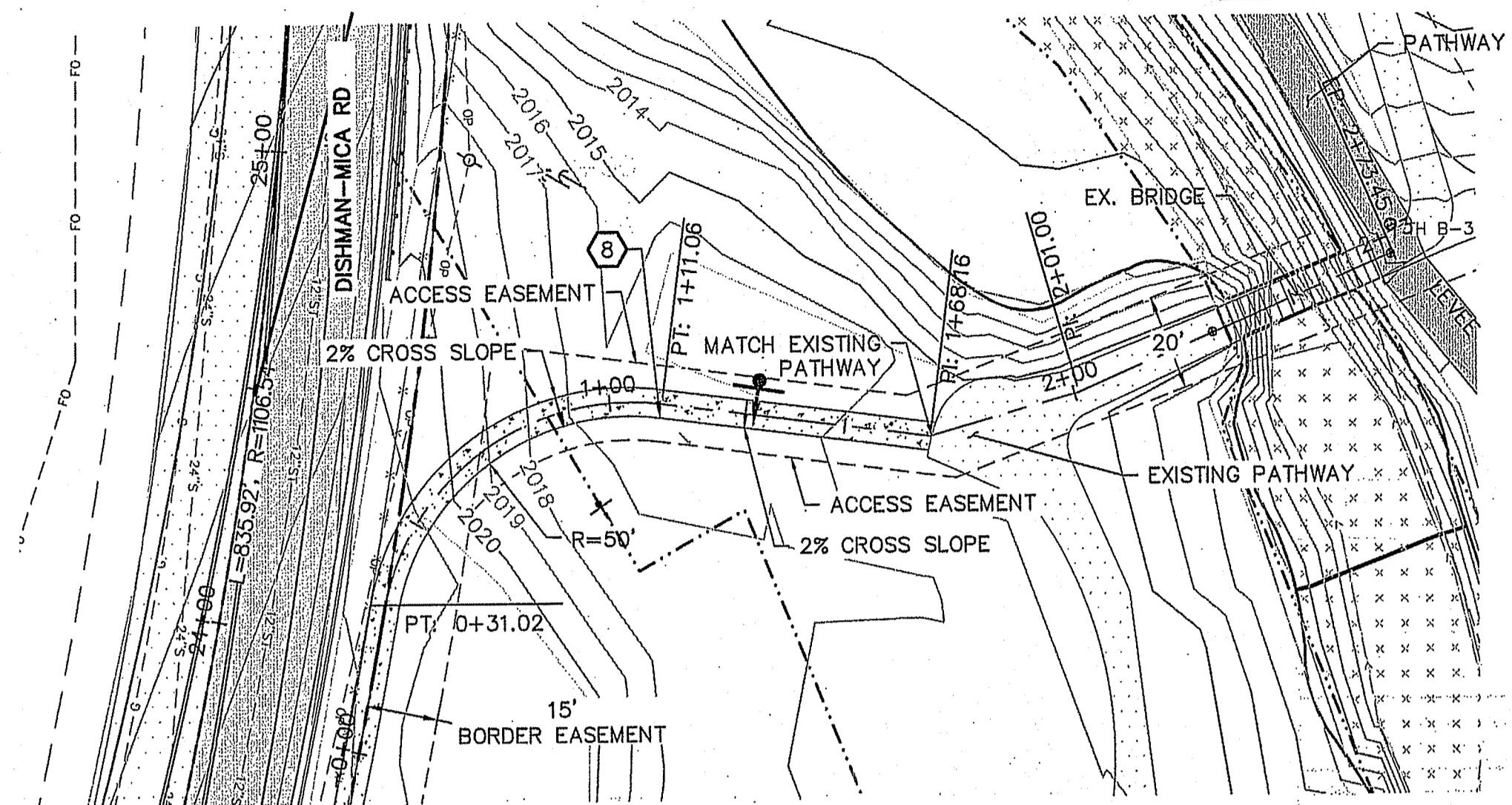
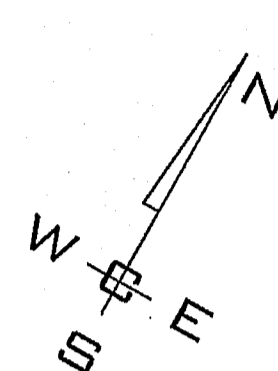
SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



SEE SHEETS C7.0-C7.2 FOR WATER PLAN.  
 SEE SHEETS C8.0-C8.2 FOR SEWER PLAN.



**SUNDOWN DR PROFILE**

DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

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|-----|----------|-----|----------------------|
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| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

|               |                 |  |
|---------------|-----------------|--|
| <b>SCALE:</b> | PROJ #: 13-1166 | <input checked="" type="checkbox"/> CIVIL      |
| HORIZONTAL:   | DATE: 08/14/18  | <input checked="" type="checkbox"/> STRUCTURAL |
| VERTICAL:     | DRAWN: JPP      | <input checked="" type="checkbox"/> SURVEYING  |
| 1"=30'        | REVIEWED: TRW   | <input type="checkbox"/> TRAFFIC               |
| 1"=10'        |                 | <input type="checkbox"/> PLANNING              |
|               |                 | <input type="checkbox"/> LANDSCAPE             |
|               |                 | <input type="checkbox"/> OTHER                 |

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2528 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2617 FAX: 509-926-0227

**SPOKANE VALLEY PAINTED HILLS PRD**  
**SUNDOWN DR & SIDEWALK P&P**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

City of Spokane Valley  
 Project/Permit No.:  
**SUB-2015-0001**  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

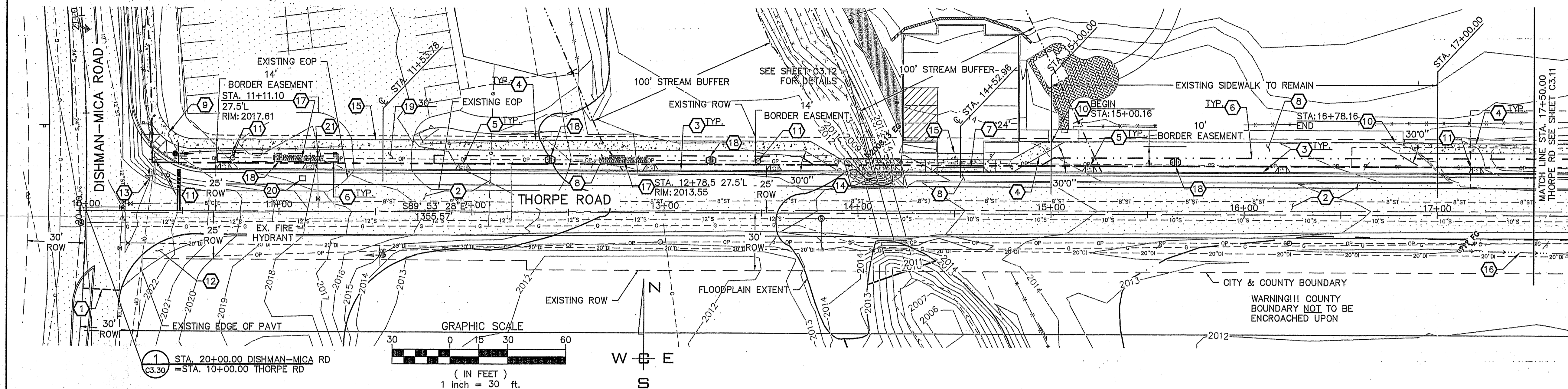
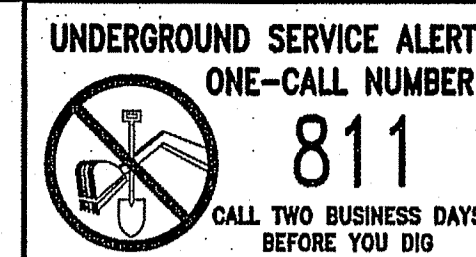
Review: \_\_\_\_\_  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_

**PLANS NOT APPROVED BY AGENCY**

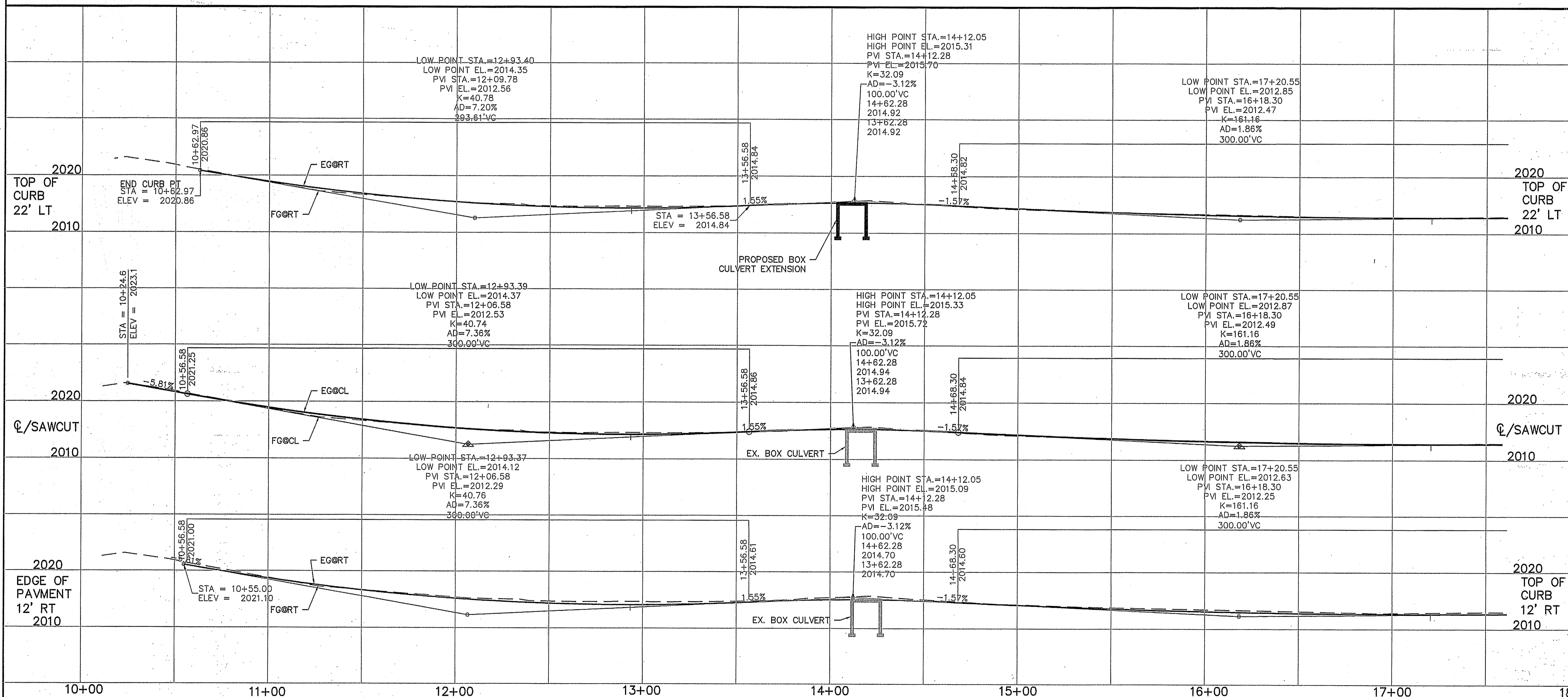
**SHEET C3.03**  
 JOB NUMBER 13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**CONSTRUCTION NOTES**

- 1 SAWCUT AND REMOVE EXISTING ASPHALT. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 2 CONSTRUCT ROAD WIDENING PER TYPICAL WIDENING SECTION, SEE DETAIL 4 SHEET CO.3.
- 3 PROVIDE AND INSTALL TYPE B CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 4 PROVIDE AND INSTALL 5' WIDE CONCRETE SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
- 5 PROVIDE AND INSTALL 4' WIDE, TYPE 1 CURB INLET PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110. SEE LOCATION TABLE, SHEET C3.11.
- 6 CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130. SEE DETAIL A ON SHEET CO.3.
- 7 PROVIDE AND INSTALL COMMERCIAL DRIVEWAY PER SPOKANE VALLEY STANDARD PLAN R-114. SEE PLAN FOR WIDTH.
- 8 REMOVE EXISTING SIDEWALK, CURB, AND ASPHALT.
- 9 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
- 10 CONNECT TO EXISTING SIDEWALK
- 11 RELOCATE EXISTING UTILITIES TO 2' MINIMUM BEHIND PROPOSED CURB PER STANDARD PLAN U-101. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.
- 12 REMOVE EXISTING ASPHALT.
- 13 EXISTING SIGN TO BE RELOCATED TO MAINTAIN 2' OF CLEARANCE FROM BACK OF CURB PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 14 EXTEND BOX CULVERT. SEE DETAILS ON SHEET C3.12.
- 15 SAWCUT AND TACK COAT TO MATCH EXISTING ASPHALT PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 16 CONSTRUCTION V-DITCH. SEE PLAN FOR ELEVATIONS.
- 17 PROVIDE AND INSTALL CATCH BASIN AND INFILTRATION GALLERY PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE DETAILS 3 AND 4 ON SHEET C3.12 FOR INFILTRATION GALLERY INSTALLATION. SEE PLAN VIEW FOR RIM ELEVATIONS.
- 18 PROVIDE AND INSTALL CHECK DAM. SEE DETAIL B ON SHEET O.3 FOR DETAILS.
- 19 PROVIDE AND INSTALL DRIVEWAY PER SPOKANE VALLEY STANDARD PLAN R-110. SEE PLAN FOR WIDTH.
- 20 RELOCATE EXISTING MAILBOX. CONTRACTOR TO COORDINATE WITH HOMEOWNER REGARDING RELOCATION.
- 21 RELOCATE FIRE HYDRANT FIRE HYDRANT BEHIND SIDEWALK PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.

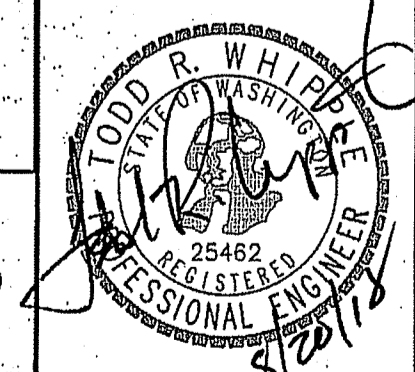


NOTE: SEE SHEET C3.11 FOR CURB INLET LOCATIONS

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
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 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



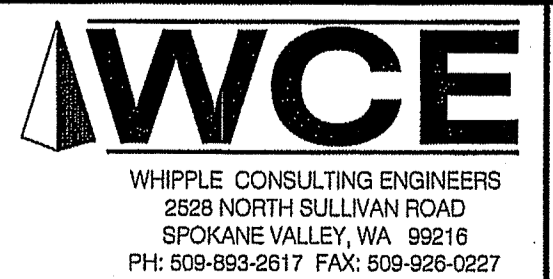
**PLANS NOT APPROVED BY AGENCY**

DATUM: NAVD - 88  
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| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=10'

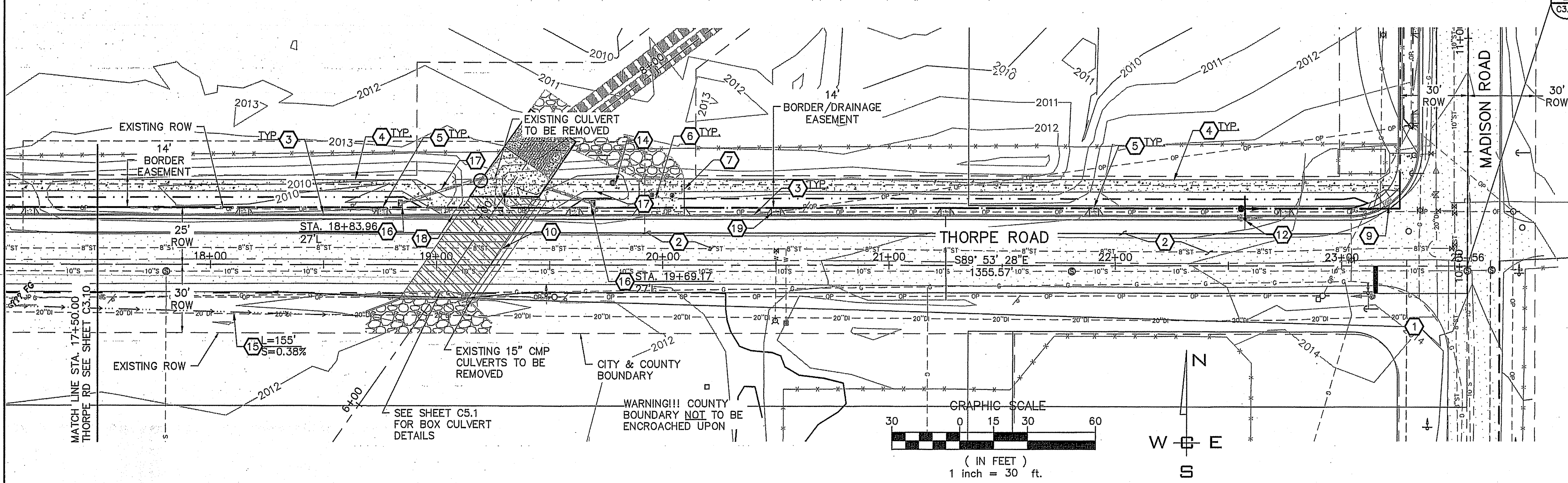
PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW



**SPOKANE VALLEY PAINTED HILLS PRD THORPE ROAD PLAN AND PROFILE**  
**DISHMAN-MICA RD. SPOKANE VALLEY, WA**

**SHEET C3.10**  
 JOB NUMBER 13-1166

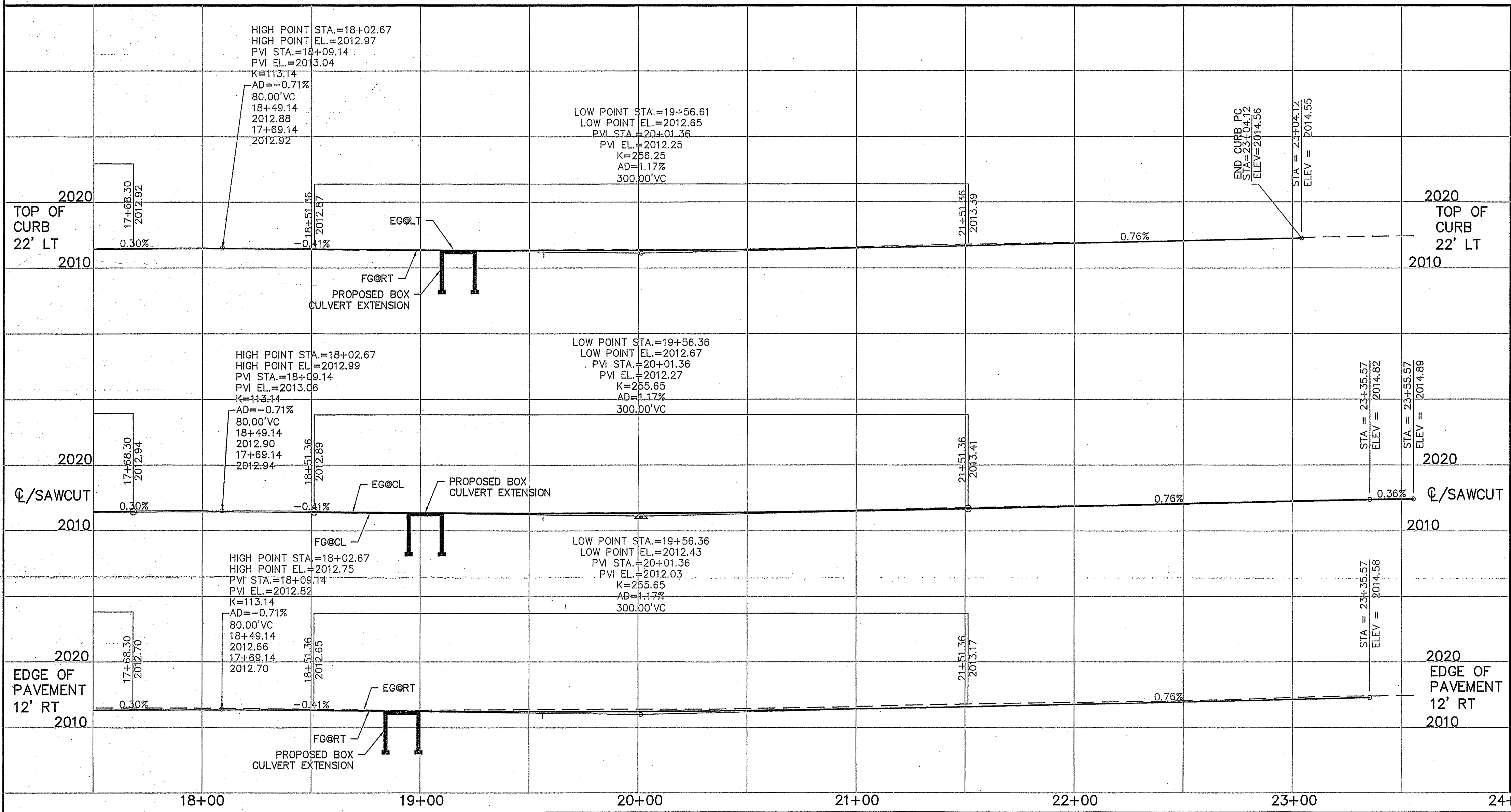
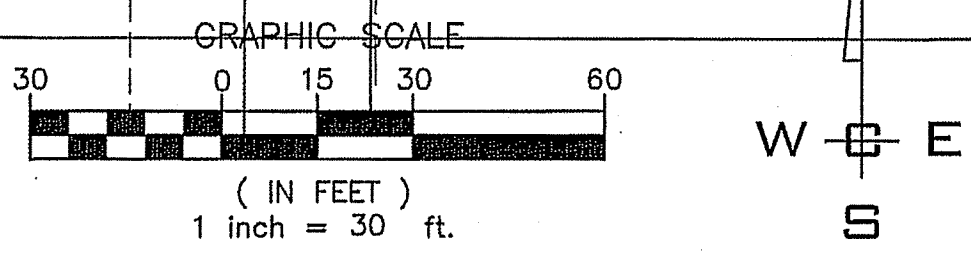
SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**DRYWELL DECOMMISSIONING NOTES**  
 DECOMMISSIONING DRYWELLS SHALL COMPLY WITH WAC 173-218-120 AND WSDOT SPEC 7-05.3(2) ABANDON EXISTING MANHOLES. THE FOLLOWING IS REQUIRED:  
 1. REMOVE ANY STRUCTURE WITHIN THREE FEET OF THE LAND SURFACE.  
 2. BACKFILL UP TO THREE FEET BELOW THE LAND SURFACE WITH MATERIAL THAT IS UNCONTAMINATED, CHEMICALLY AND BIOLOGICALLY INERT, AND THAT DRAINS EQUAL TO OR MORE SLOWLY THAN THE NATIVE MATERIAL SURROUNDING THE UIC WILL, AND  
 3. FILL THE REMAINING THREE FEET DIRECTLY BELOW THE LAND SURFACE WITH NATIVE SOIL OR OTHER STRUCTURALLY SOUND MATERIAL COMMON WITH CURRENT ENGINEERING PRACTICES.

**CONSTRUCTION NOTES**

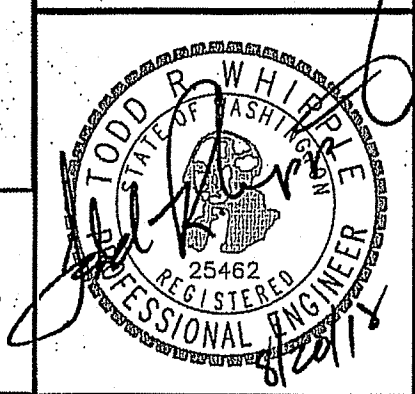
- 1 SAWCUT AND REMOVE EXISTING ASPHALT. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 2 CONSTRUCT ROAD PER CROSS SECTION, SEE DETAIL 4 ON SHEET C0.3.
- 3 PROVIDE AND INSTALL TYPE B CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 4 PROVIDE AND INSTALL 5' WIDE CONCRETE SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
- 5 PROVIDE AND INSTALL 4' WIDE, TYPE 1 CURB INLET PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110. SEE LOCATION TABLE ON THIS SHEET.
- 6 CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130. SEE DETAIL A ON SHEET C0.3.
- 7 PROVIDE AND INSTALL 20' TYPE II DRIVEWAY WITH SEPARATED SIDEWALK PER SPOKANE VALLEY STANDARD PLAN R-111.
- 8 RESERVED
- 9 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
- 10 PROVIDE AND INSTALL BOX CULVERT, SEE SHEET C5.2 FOR DETAILS.
- 11 RESERVED
- 12 EXISTING SIGN TO BE RELOCATED TO MAINTAIN 2' OF CLEARANCE FROM BACK OF CURB PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 13 PROVIDE AND INSTALL 5.5' WIDE CONCRETE SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
- 14 EXISTING DRYWELL TO BE REMOVED/ABANDONED PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE NOTES, THIS SHEET.
- 15 CONSTRUCT V-DITCH, PER TYPICAL CROSS SECTION.
- 16 PROVIDE AND INSTALL TYPE I CATCH BASIN WITH FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE SHEET C5.01 FOR LOCATION (H&V) AND DETAILS.
- 17 PROVIDE AND INSTALL 12" CMP PIPE PER CITY SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE SHEET C5.1 FOR DETAILS.
- 18 PROVIDE AND INSTALL 6' WIDE CONCRETE SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
- 19 RELOCATE EXISTING UTILITIES TO 2' MINIMUM BEHIND PROPOSED CURB PER STANDARD PLAN U-101. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.



| CURB INLET CL LOCATION |         |          |
|------------------------|---------|----------|
| ALIGNMENT              | STATION | OFFSET   |
| THORPE RD              | 10+72   | 21.5' LT |
| THORPE RD              | 11+16   | 21.5' LT |
| THORPE RD              | 11+95   | 21.5' LT |
| THORPE RD              | 12+93   | 21.5' LT |
| THORPE RD              | 13+56   | 21.5' LT |
| THORPE RD              | 15+20   | 21.5' LT |
| THORPE RD              | 16+20   | 21.5' LT |
| THORPE RD              | 17+20   | 21.5' LT |
| THORPE RD              | 19+56   | 21.5' LT |
| THORPE RD              | 20+50   | 21.5' LT |
| THORPE RD              | 21+25   | 21.5' LT |
| THORPE RD              | 21+91   | 21.5' LT |
| THORPE RD              | 22+75   | 21.5' LT |

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
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City of Spokane Valley  
 Development Engineering  
 Reviewer: \_\_\_\_\_  
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PLANS  
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SCALE:  
 HORIZONTAL:  
 1"=30'  
 VERTICAL:  
 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
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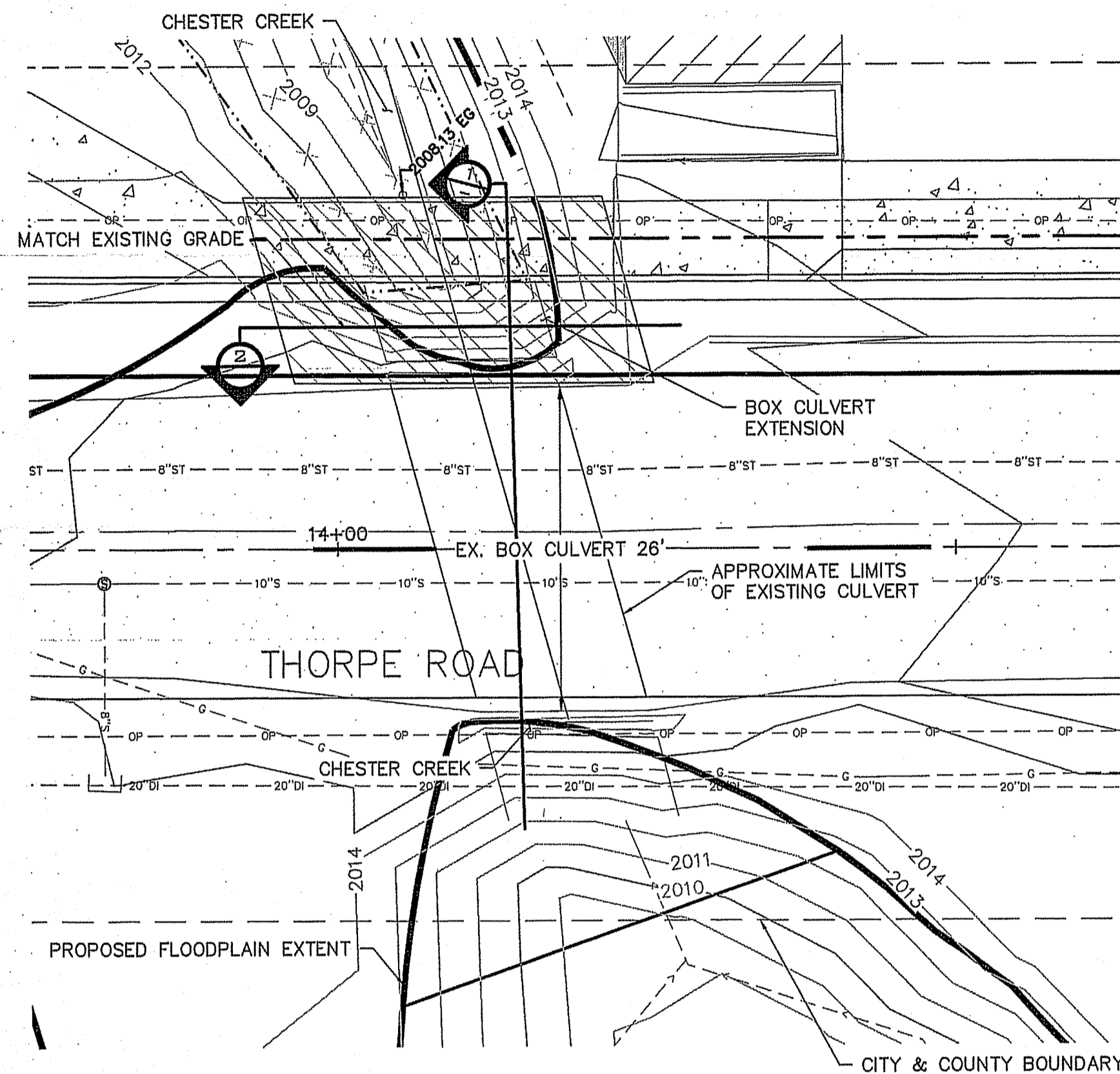
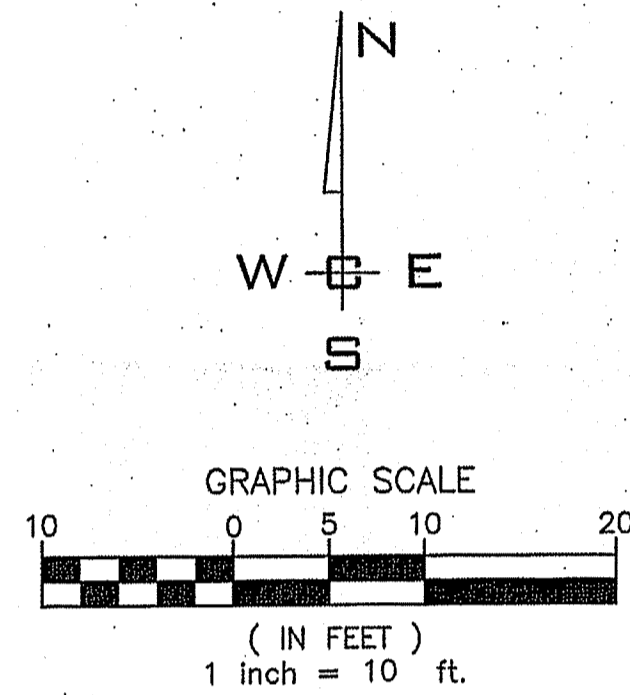


**SPOKANE VALLEY PAINTED HILLS PRD**  
**THORPE ROAD PLAN AND PROFILE**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

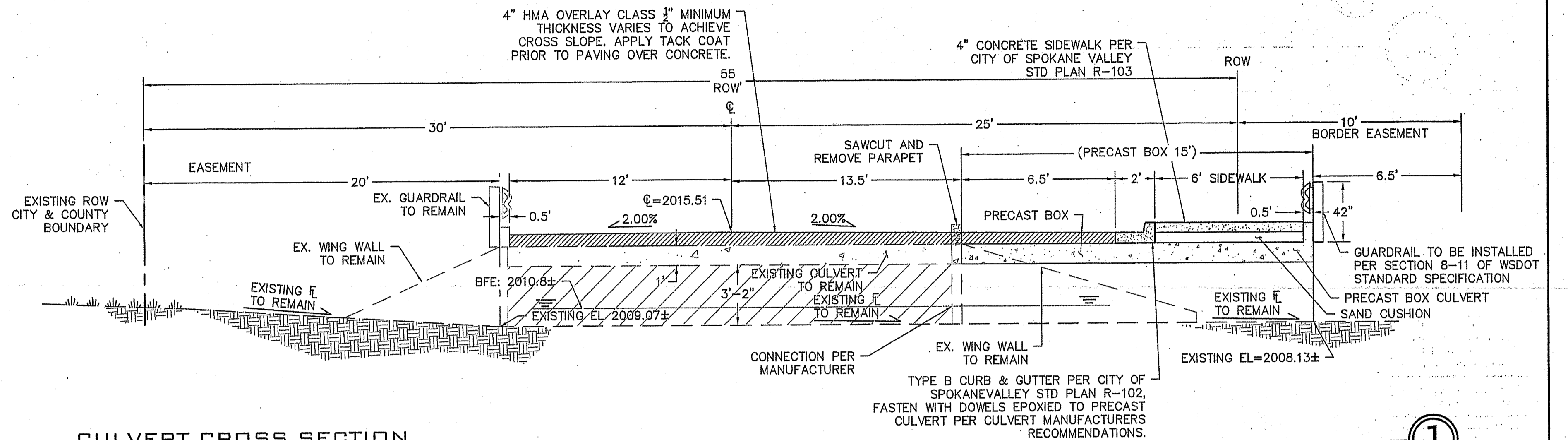
SHEET  
 C3.11  
 JOB NUMBER  
 13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
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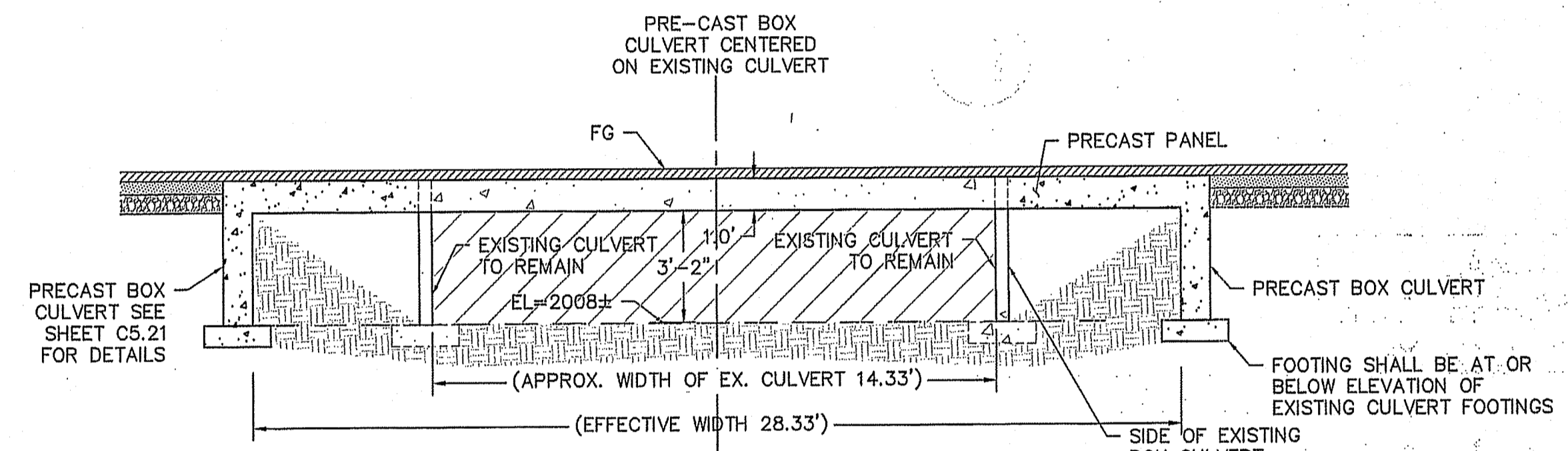
**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



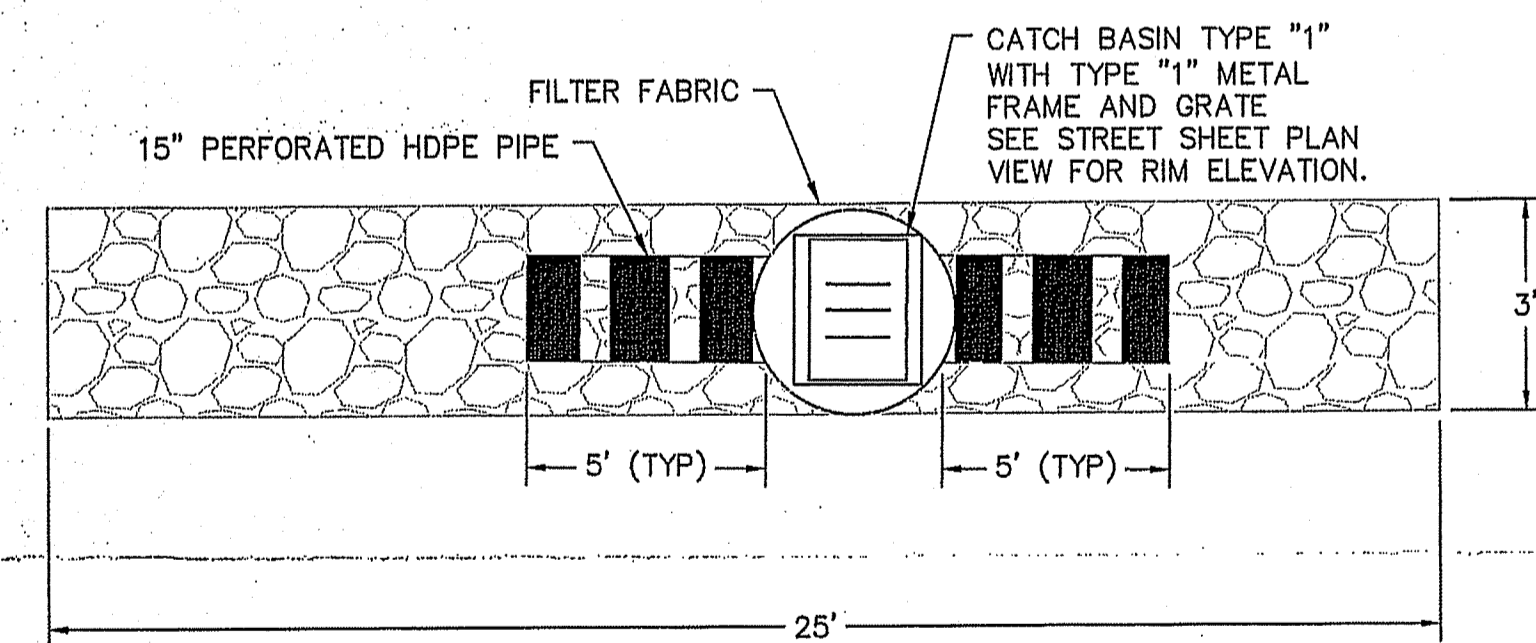
**CHESTER CREEK CULVERT WIDENING**  
 SCALE: 1"=10'



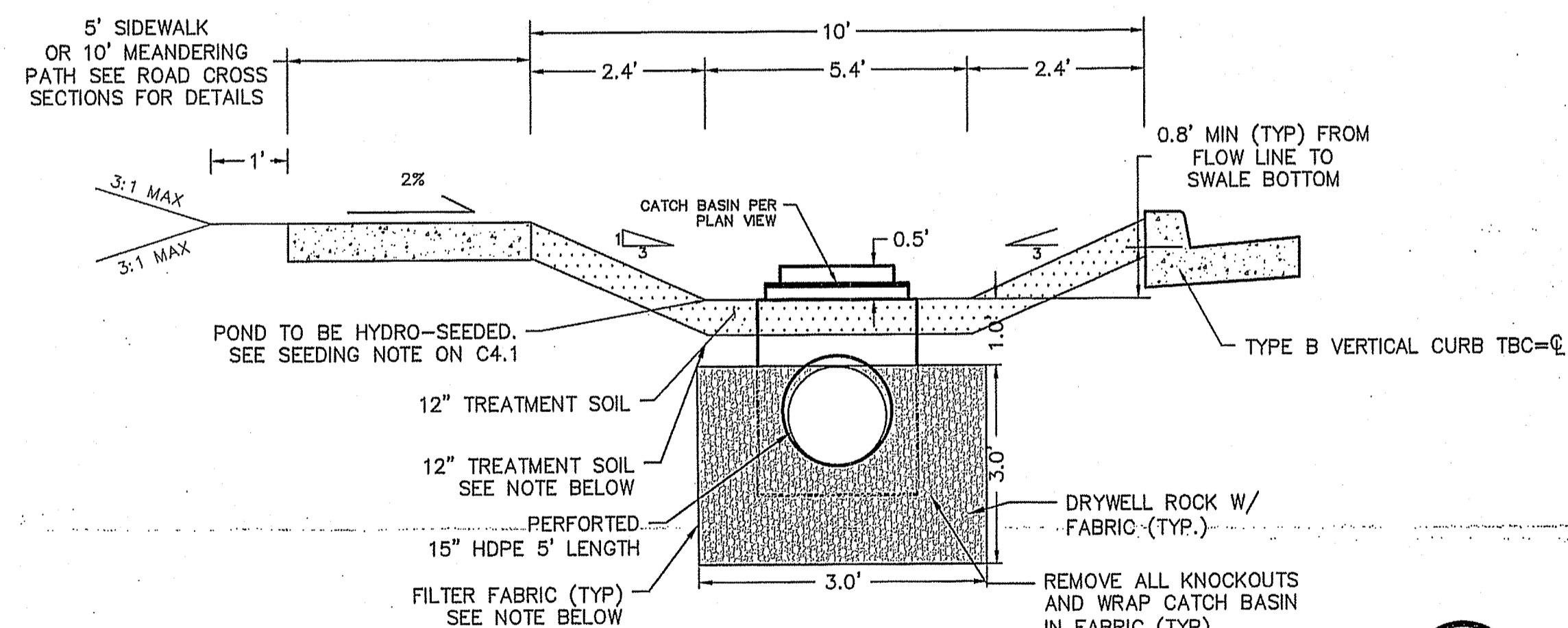
**CULVERT CROSS SECTION**  
 NOT TO SCALE



**CULVERT CROSS SECTION**  
 NOT TO SCALE



**TYPICAL GRAVEL GALLERY DETAIL (PLAN VIEW)**

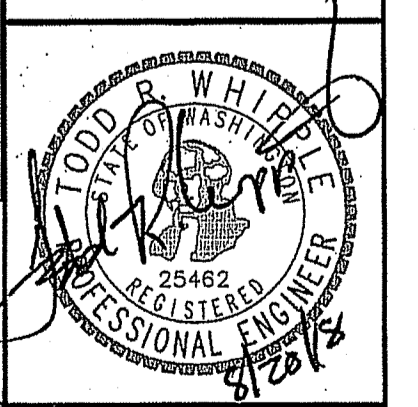


**TYPICAL GRAVEL GALLERY DETAIL (PROFILE VIEW)**

**TREATMENT SOIL NOTE:**  
 12" OF TREATMENT SOIL CONSISTING OF A THOROUGHLY BLENDED MIX OF 50% COMPOST WITH 50% NATIVE SOIL. SWALE BOTTOM TO BE HYDROSEEDDED OR SODDED.

**PLANS NOT APPROVED BY AGENCY**

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0068  
 (Engineered Grading)  
 City of Spokane Valley  
 Development Engineering  
 Reviewer:  
 How Street Miles - Public:  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted:  
 Acceptance Comments:



**DATUM: NAVD - 88**  
 TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.67 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: N/A  
 VERTICAL: N/A

**PROJ #:** 13-1166  
**DATE:** 08/14/18  
**DRAWN:** JPP  
**REVIEWED:** TRW

CIVIL  
 STRUCTURAL  
 SURVEYING  
 TRAFFIC  
 PLANNING  
 LANDSCAPE  
 OTHER

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2525 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2617 FAX: 509-926-0227

**SPOKANE VALLEY PAINTED HILLS PRD**  
**CHESTER CREEK CULVERT WIDENING**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C3.12**  
 JOB NUMBER  
**13-1166**



**CONSTRUCTION NOTES**

- 1 SAWCUT AT CENTERLINE AND REMOVE EXISTING ASPHALT. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
- 2 CONSTRUCT ROAD WIDENING PER TYPICAL WIDENING SECTION, DETAIL 5 SHEET C0.3.
- 3 PROVIDE AND INSTALL TYPE B CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 4 PROVIDE AND INSTALL 10' ASPHALT PATHWAY. PAVEMENT SECTION TO BE 2" OF 1/2" HMA ON 4" CSTC.
- 5 PROVIDE AND INSTALL 4' WIDE, TYPE 1 CURB DROP PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110. SEE LOCATION TABLE, THIS SHEET.
- 6 CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130, SEE TYPICAL SWALE DETAIL A, SHEET C.03.
- 7 RESERVED.
- 8 PROVIDE AND INSTALL STREET MONUMENT AT CENTERLINE INTERSECTIONS PER CITY OF SPOKANE VALLEY STANDARD R-145.
- 9 RELOCATE EXISTING UTILITIES TO 2' MINIMUM BEHIND PROPOSED CURB PER STANDARD PLAN U-101. UTILITIES SHALL NOT BE WITHIN SIDEWALK. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.
- 10 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
- 11 SAWCUT AND REMOVE EXISTING ASPHALT 10' ON EITHER SIDE OF STORM PIPE. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
- 12 PROVIDE AND INSTALL 2-48" RCP PIPE. SEE SHEET C5.3 FOR DETAILS.
- 13 REPLACE EXISTING CULVERT AND EXTEND WITH 18" CMP. SEE SHEET C5.22 FOR DETAILS.
- 14 RESERVED.
- 15 INSTALL TYPE III BARRICADE PER CITY OF SPOKANE VALLEY STANDARD PLAN R-142.
- 16 RESERVED.
- 17 PROVIDE AND INSTALL TYPE I CATCH BASIN WITH FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE SHEET C5.3 FOR DETAILS.
- 18 PROVIDE AND INSTALL 12" PVC PIPE PER CITY SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE SHEET C5.3 FOR DETAILS.
- 19 PROVIDE AND INSTALL L.E.D. STREET LIGHT (EQUIVANT OF A 300W HIGH PRESSURE SODIUM LIGHT) LOCATED ON WOODEN POLE COORDINATE FINAL LOCATION AND POWER SUPPLY WITH INLAND POWER.

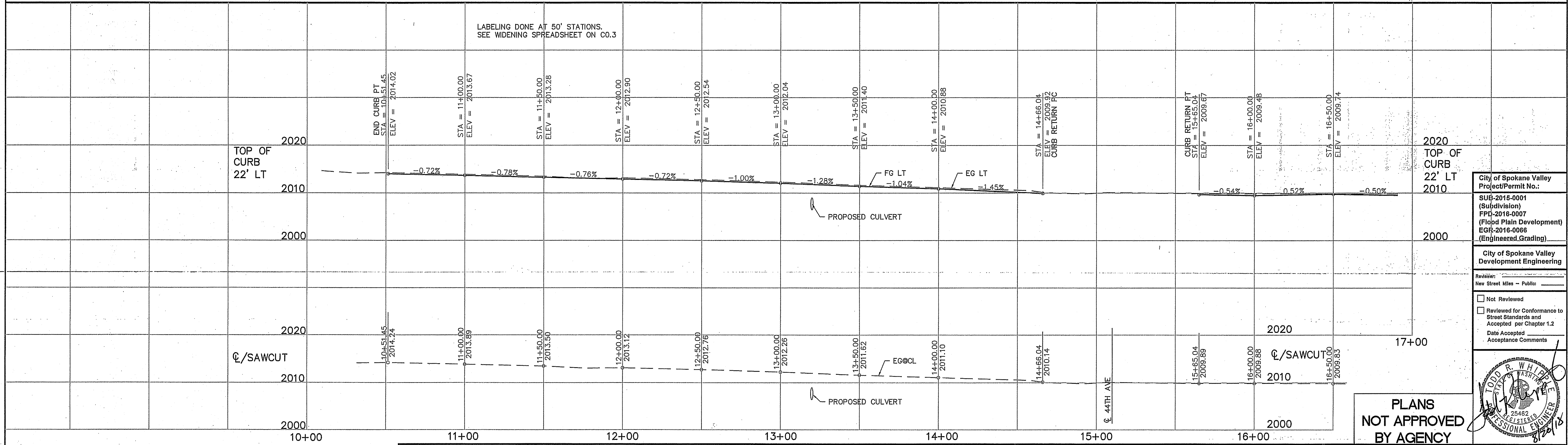
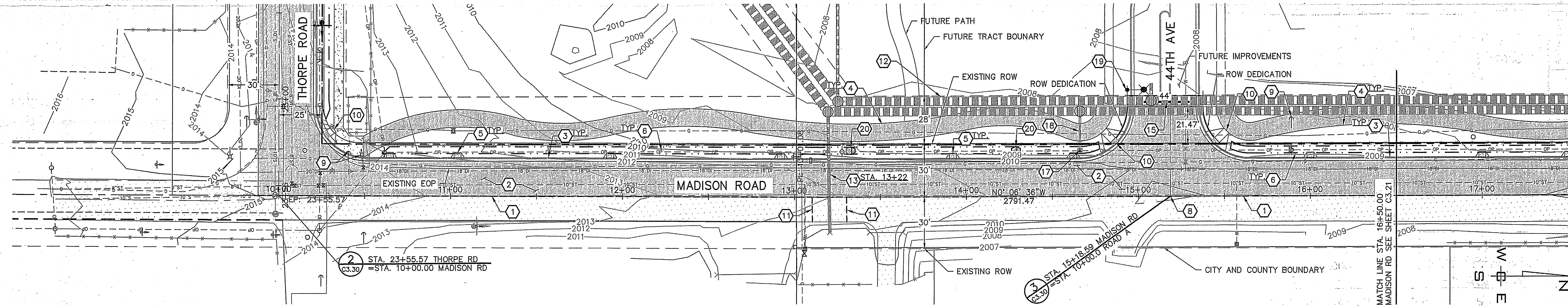
SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

20 PROVIDE AND INSTALL CHECK DAM. SEE DETAIL B, SHEET C.03

| CURB INLET CL LOCATION |         |          |
|------------------------|---------|----------|
| ALIGNMENT              | STATION | OFFSET   |
| MADISON RD             | 10+65   | 21.5' LT |
| MADISON RD             | 10+92   | 21.5' LT |
| MADISON RD             | 11+92   | 21.5' LT |
| MADISON RD             | 12+92   | 21.5' LT |
| MADISON RD             | 13+92   | 21.5' LT |
| MADISON RD             | 14+62   | 21.5' LT |
| MADISON RD             | 16+00   | 21.5' LT |

**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG

SEE SHEET C7.0-C7.2 FOR WATER PLAN.

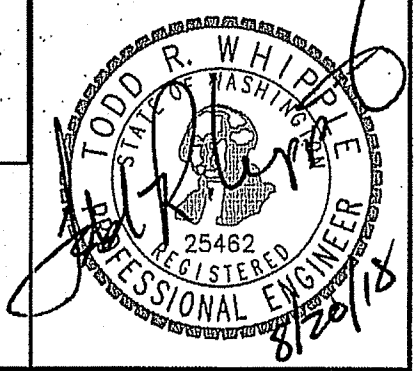


City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Data Accepted  
 Acceptance Comments



**PLANS NOT APPROVED BY AGENCY**

DATUM: NAVD - 88  
 TBM 9-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.87  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: TEW  
 REVIEWED: TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2828 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2817 FAX: 509-826-0227

**SPOKANE VALLEY PAINTED HILLS PRD  
 MADISON ROAD PLAN AND PROFILE  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET C3.20**  
 JOB NUMBER 13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

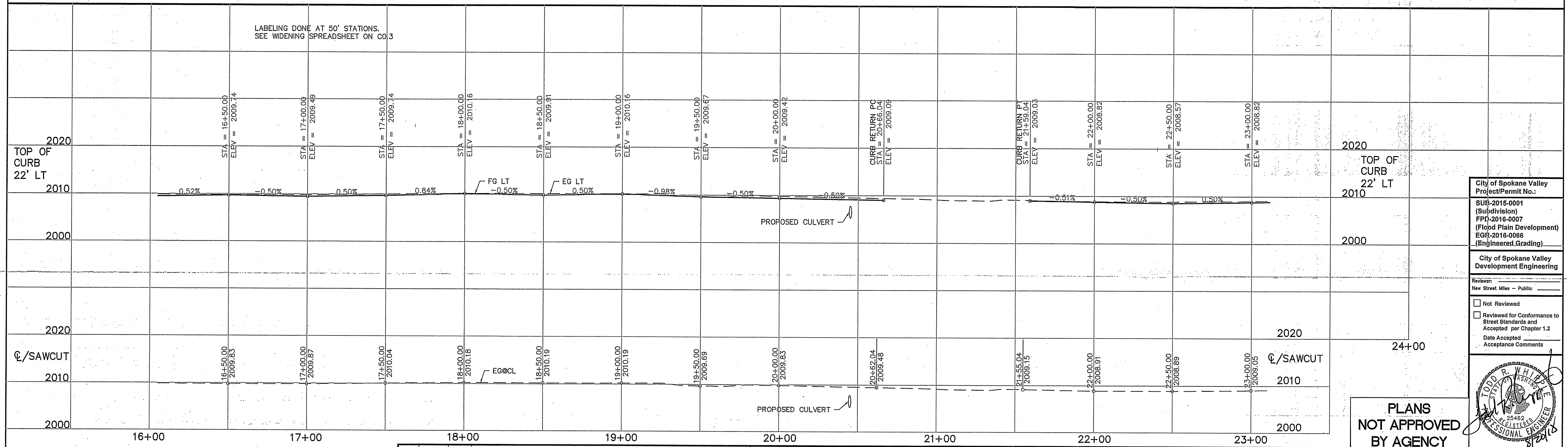
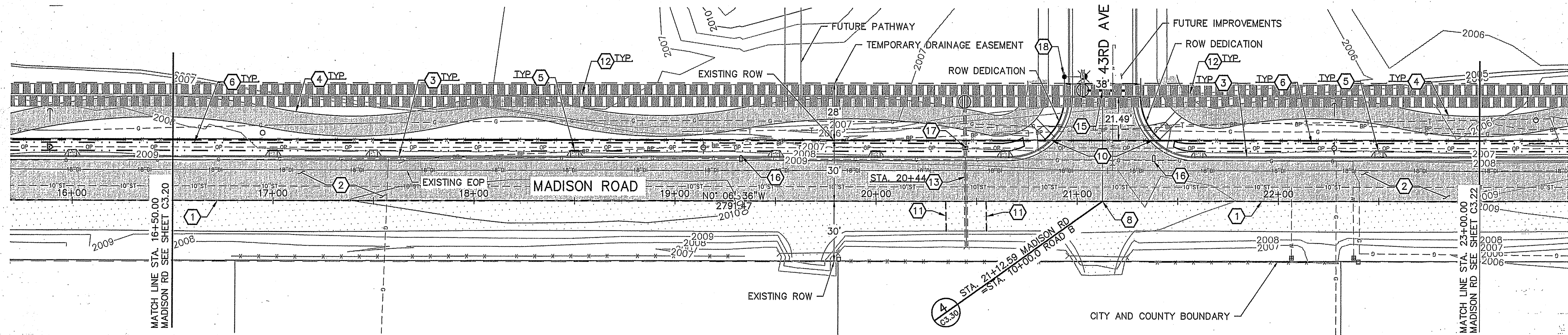
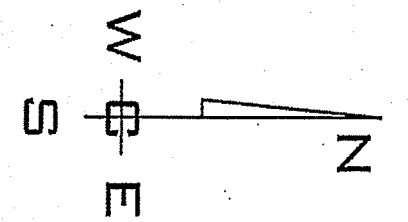
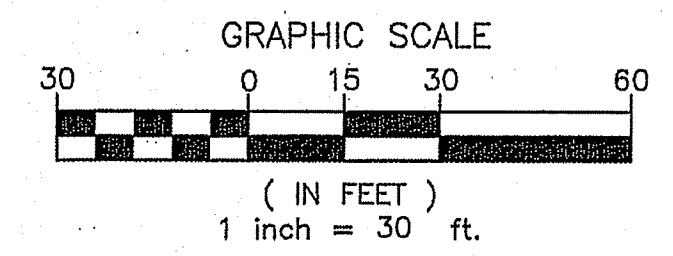
**CONSTRUCTION NOTES**

- 1 SAWCUT AT CENTERLINE AND REMOVE EXISTING ASPHALT. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
- 2 CONSTRUCT ROAD WIDENING PER TYPICAL WIDENING SECTION, DETAIL 5 SHEET C0.30.
- 3 PROVIDE AND INSTALL TYPE B CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
- 4 PROVIDE AND INSTALL 10' ASPHALT PATHWAY. PAVEMENT SECTION TO BE 2" OF 1/2" HMA ON 4" CSTC.
- 5 PROVIDE AND INSTALL 4' WIDE, TYPE 1 CURB DROP PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110. SEE THIS SHEET FOR LOCATION TABLE.
- 6 CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130 SEE TYPICAL SWALE DETAIL A, SHEET C.03.
- 7 RESERVED.
- 8 PROVIDE AND INSTALL STREET MONUMENT AT CENTERLINE INTERSECTIONS PER CITY OF SPOKANE VALLEY STANDARD R-145.
- 9 RELOCATE EXISTING UTILITIES TO 2' BEHIND PROPOSED CURB PER STANDARD PLAN U-101. UTILITIES SHALL NOT BE WITHIN SIDEWALK. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.
- 10 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
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- 13 REPLACE EXISTING CULVERT AND EXTEND WITH 18" CMP. SEE SHEET C5.22 FOR DETAILS.
- 14 RESERVED.
- 15 INSTALL TYPE III BARRICADE PER CITY OF SPOKANE VALLEY STANDARD PLAN R-142.
- 16 EXISTING MAILBOX TO BE RELOCATED.
- 17 PROVIDE AND INSTALL TYPE I CATCH BASIN WITH FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE SHEET C5.3 FOR DETAILS.
- 18 PROVIDE AND INSTALL L.E.D. STREET LIGHT (EQUIVARIANT OF A 300W HIGH PRESSURE SODIUM LIGHT) LOCATED ON WOODEN POLE COORDINATE FINAL LOCATION AND POWER SUPPLY WITH INLAND POWER.

SEE SHEET C7.0-C7.2 FOR WATER PLAN.

| CURB INLET CL LOCATION |         |          |
|------------------------|---------|----------|
| ALIGNMENT              | STATION | OFFSET   |
| MADISON RD             | 17+00   | 21.5' LT |
| MADISON RD             | 17+50   | 21.5' LT |
| MADISON RD             | 18+50   | 21.5' LT |
| MADISON RD             | 19+50   | 21.5' LT |
| MADISON RD             | 20+00   | 21.5' LT |
| MADISON RD             | 20+64   | 21.5' LT |
| MADISON RD             | 21+60   | 21.5' LT |
| MADISON RD             | 22+50   | 21.5' LT |

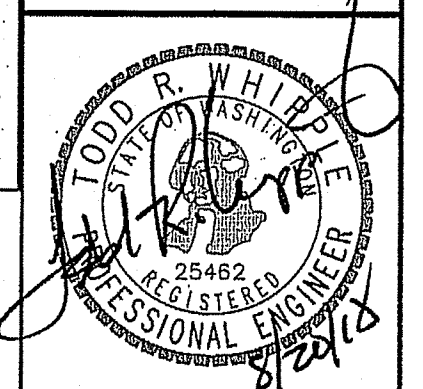
**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPI-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0068  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewers:  
 New Street Miles - Public:  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted  
 Acceptance Comments



**PLANS NOT APPROVED BY AGENCY**

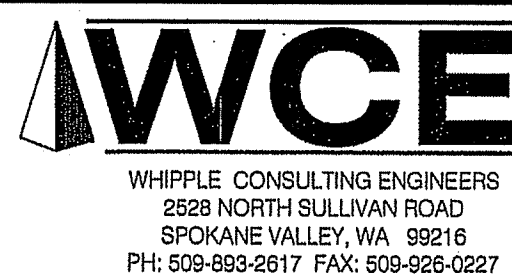
DATUM: NAVD - 88  
 TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: TEW  
 REVIEWED: TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER



**SPOKANE VALLEY PAINTED HILLS PRD  
 MADISON ROAD PLAN AND PROFILE  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET C3.21**  
 JOB NUMBER 13-1166

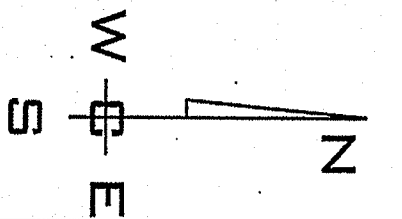
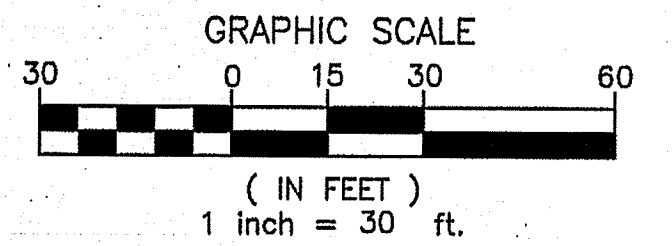
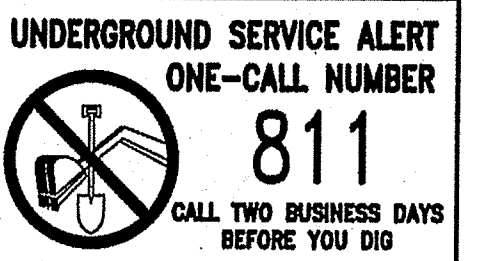
**CONSTRUCTION NOTES**

- 1 SAWCUT AT CENTERLINE AND REMOVE EXISTING ASPHALT, TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
- 2 CONSTRUCT ROAD WIDENING PER TYPICAL WIDENING SECTION, DETAIL 5 SHEET C0.3.
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- 5 PROVIDE AND INSTALL 4' WIDE, TYPE 1 CURB DROP PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110. SEE THIS SHEET FOR LOCATION TABLE.
- 6 CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130 SEE TYPICAL SWALE DETAIL A, SHEET C.03.
- 7 RESERVED.
- 8 PROVIDE AND INSTALL STREET MONUMENT AT CENTERLINE INTERSECTIONS PER CITY OF SPOKANE VALLEY STANDARD R-145.
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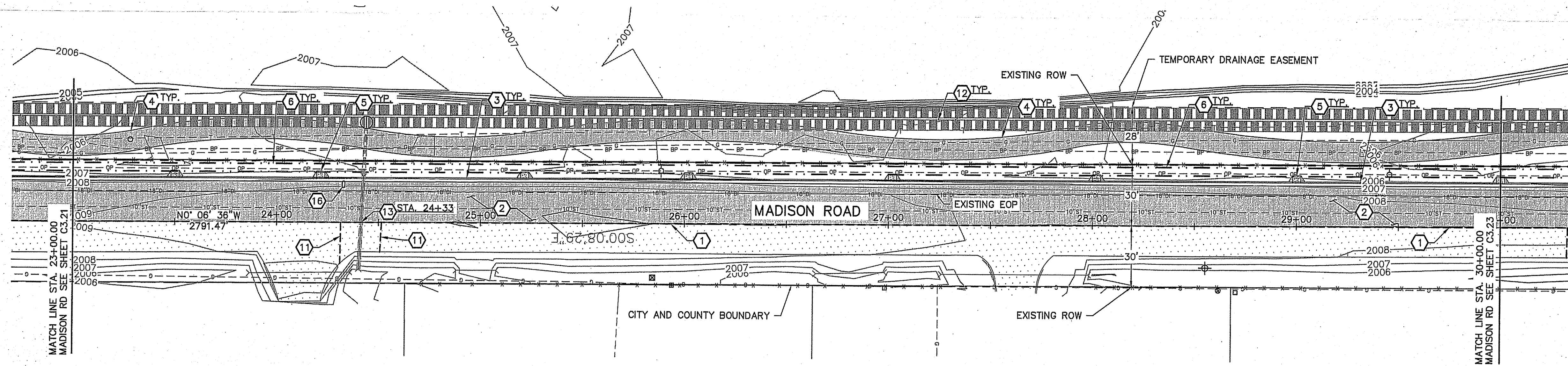
- 10 PROVIDE AND INSTALL PEDESTRIAN RAMP PER CITY OF SPOKANE VALLEY STANDARD PLAN R-107.
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- 12 PROVIDE AND INSTALL 2-48" RCP PIPE. SEE SHEET C5.3 FOR DETAILS.
- 13 REPLACE EXISTING CULVERT AND EXTEND WITH 18" CMP. SEE SHEET C5.22 FOR DETAILS.
- 14 RESERVED.
- 15 RESERVED.
- 16 EXISTING MAILBOX TO BE RELOCATED.

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

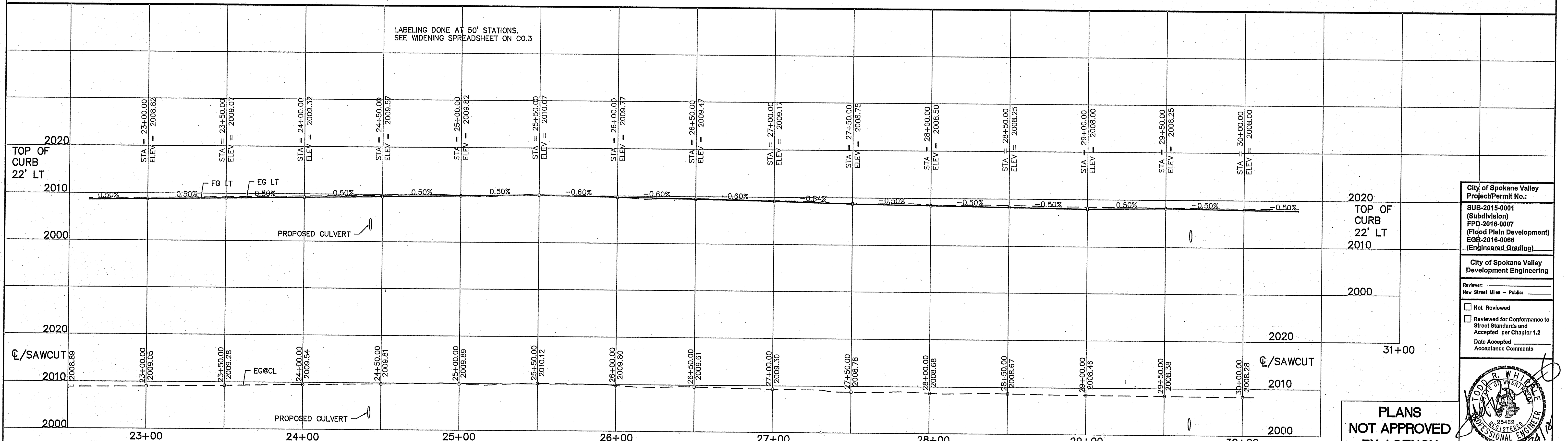
SEE SHEET C3.20 FOR CURB INLET LOCATION TABLE.



| CURB INLET CL LOCATION |         |          |
|------------------------|---------|----------|
| ALIGNMENT              | STATION | OFFSET   |
| MADISON RD             | 23+50   | 21.5' LT |
| MADISON RD             | 24+22   | 21.5' LT |
| MADISON RD             | 25+22   | 21.5' LT |
| MADISON RD             | 26+02   | 21.5' LT |
| MADISON RD             | 27+02   | 21.5' LT |
| MADISON RD             | 28+02   | 21.5' LT |
| MADISON RD             | 29+00   | 21.5' LT |
| MADISON RD             | 30+00   | 21.5' LT |



RECEIVED  
 AUG 24 2018  
 CITY OF SPOKANE VALLEY



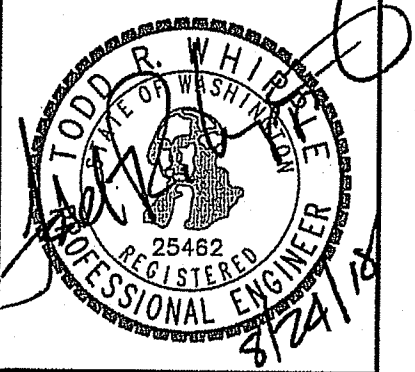
LABELING DONE AT 50' STATIONS.  
 SEE WIDENING SPREADSHEET ON C0.3

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Data Accepted  
 Acceptance Comments



PLANS  
 NOT APPROVED  
 BY AGENCY

DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD20) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

SCALE:  
 HORIZONTAL:  
 1"=30'  
 VERTICAL:  
 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: TEW  
 REVIEWED: TRW

**IWCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2828 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2817 FAX: 509-928-0227

**SPOKANE VALLEY PAINTED HILLS PRD  
 MADISON ROAD PLAN AND PROFILE  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET  
 C3.22**

JOB NUMBER  
**13-1166**

**CONSTRUCTION NOTES**

- 1 SAWCUT AT CENTERLINE AND REMOVE EXISTING ASPHALT. TACK COAT AND MATCH TO EXISTING ASPHALT WITH NEW ASPHALT PER CITY OF SPOKANE VALLEY SPECIFICATIONS.
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- 5 PROVIDE AND INSTALL 4' WIDE, TYPE 1 CURB DROP PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110. SEE THIS SHEET FOR LOCATION TABLE.
- 6 CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130 SEE TYPICAL SWALE DETAIL A, SHEET C.03.
- 7 PROVIDE AND INSTALL 67' TAPER FROM FACE OF PROPOSED CURB TO EXISTING EDGE OF ASPHALT PER TAPER CALCUALIONS, THIS SHEET.
- 8 PROVIDE AND INSTALL STREET MONUMENT AT CENTERLINE INTERSECTIONS PER CITY OF SPOKANE VALLEY STANDARD R-145.
- 9 RELOCATE EXISTING UTILITIES TO 2' BEHIND PROPOSED CURB PER STANDARD PLAN U-101. UTILITIES SHALL NOT BE WITHIN SIDEWALK. CONTRACTOR TO COORDINATE WITH APPROPRIATE AGENCY PRIOR TO RELOCATION.

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- 18 PROVIDE AND INSTALL 12" PVC PIPE PER CITY SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE SHEET C5.3 FOR DETAILS.
- 19 PROVIDE AND INSTALL 15' WIDE TEMPORARY ACCESS ROAD. 6" CSTC ON (95%) COMPACTED SUBGRADE. SEE SHEET C5.4 FOR MORE INFORMATION.

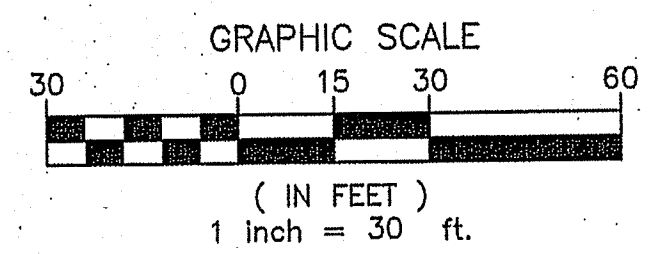
SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

SEE SHEET C3.20 FOR CURB INLET LOCATION TABLE.  
 SEE SHEETS C7.0-C7.2 FOR WATER PLAN.

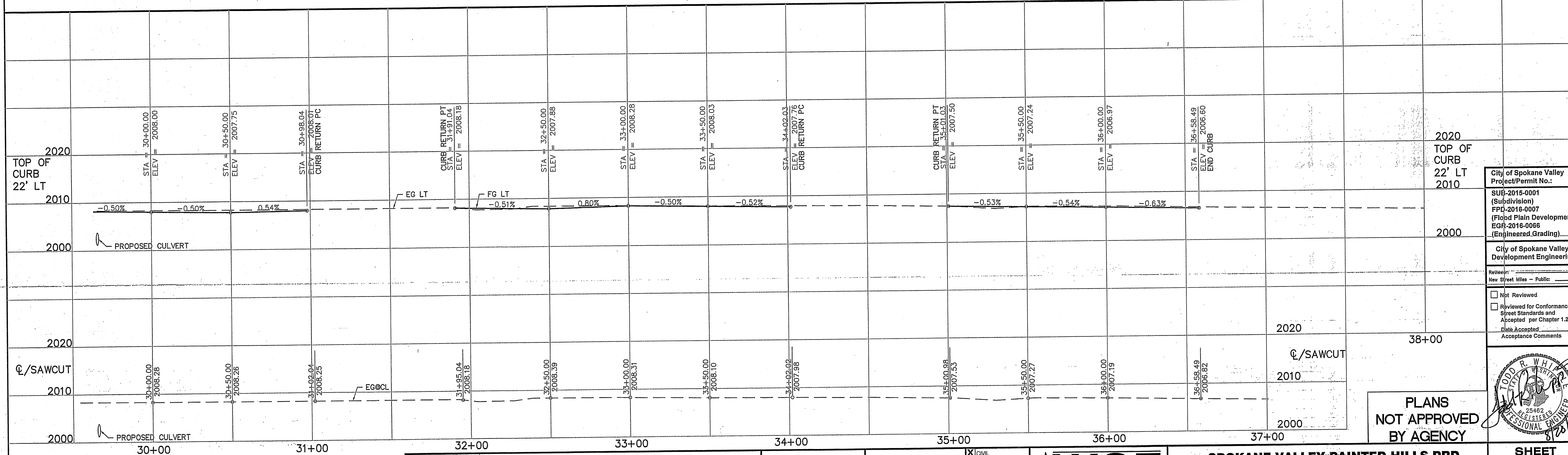
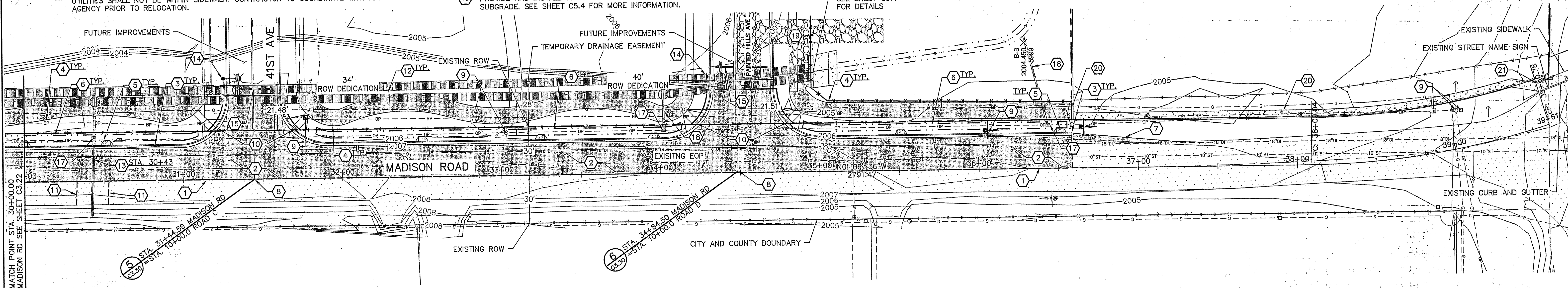
**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG

**TAPER CALCULATIONS**

$L = \frac{W(S)^2}{60}$   
 $6.5(35')^2 / 60 = 133'$  (DEPARTING)  
 $133' / 2 = 67'$  (ARRIVING)



| ALIGNMENT  | STATION | OFFSET   |
|------------|---------|----------|
| MADISON RD | 30+00   | 21.5' LT |
| MADISON RD | 30+50   | 21.5' LT |
| MADISON RD | 32+50   | 21.5' LT |
| MADISON RD | 33+25   | 21.5' LT |
| MADISON RD | 33+96   | 21.5' LT |
| MADISON RD | 35+51   | 21.5' LT |
| MADISON RD | 36+51   | 21.5' LT |



**DATUM: NAVD - 88**  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

|                    |                        |   |
|--------------------|------------------------|---|
| <b>SCALE:</b>      | <b>PROJ #:</b> 13-1166 | <input checked="" type="checkbox"/> CIVIL |
| <b>HORIZONTAL:</b> | <b>DATE:</b> 08/14/18  | <input type="checkbox"/> STRUCTURAL       |
| <b>VERTICAL:</b>   | <b>DRAWN:</b> TEW      | <input type="checkbox"/> SURVEYING        |
| 1"=30'             | <b>REVIEWED:</b> TRW   | <input type="checkbox"/> TRAFFIC          |
| 1"=10'             |                        | <input type="checkbox"/> PLANNING         |
|                    |                        | <input type="checkbox"/> LANDSCAPE        |
|                    |                        | <input type="checkbox"/> OTHER            |

**IWCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2626 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-993-2617 FAX: 509-926-0227

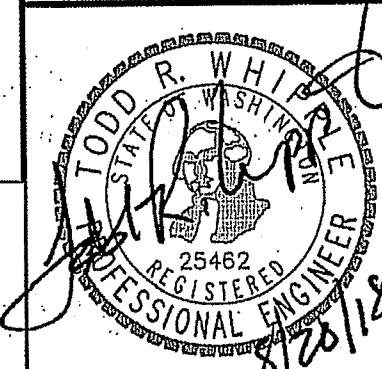
**SPOKANE VALLEY PAINTED HILLS PRD**  
**MADISON ROAD PLAN AND PROFILE**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C3.23**  
**JOB NUMBER 13-1166**

**PLANS NOT APPROVED BY AGENCY**

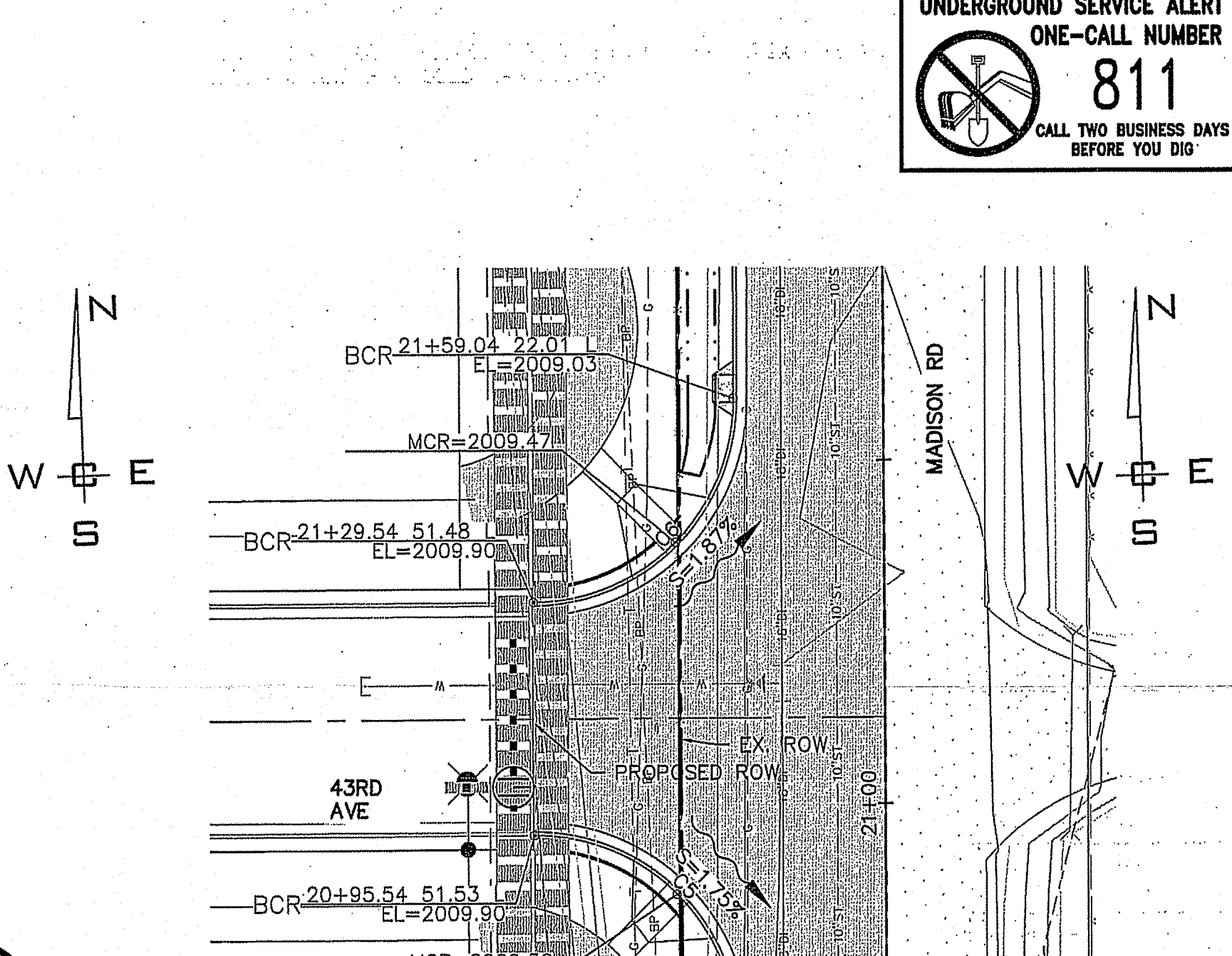
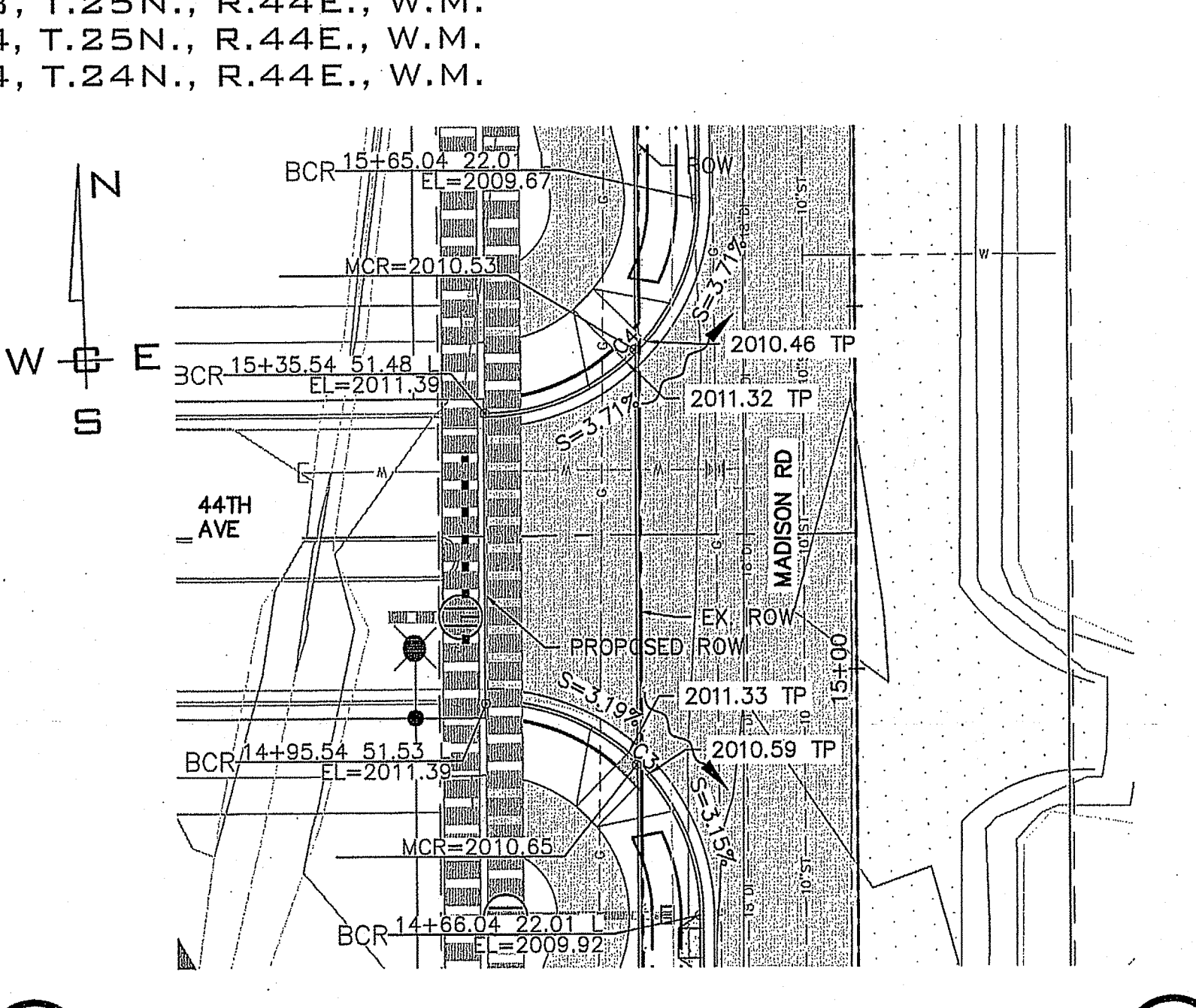
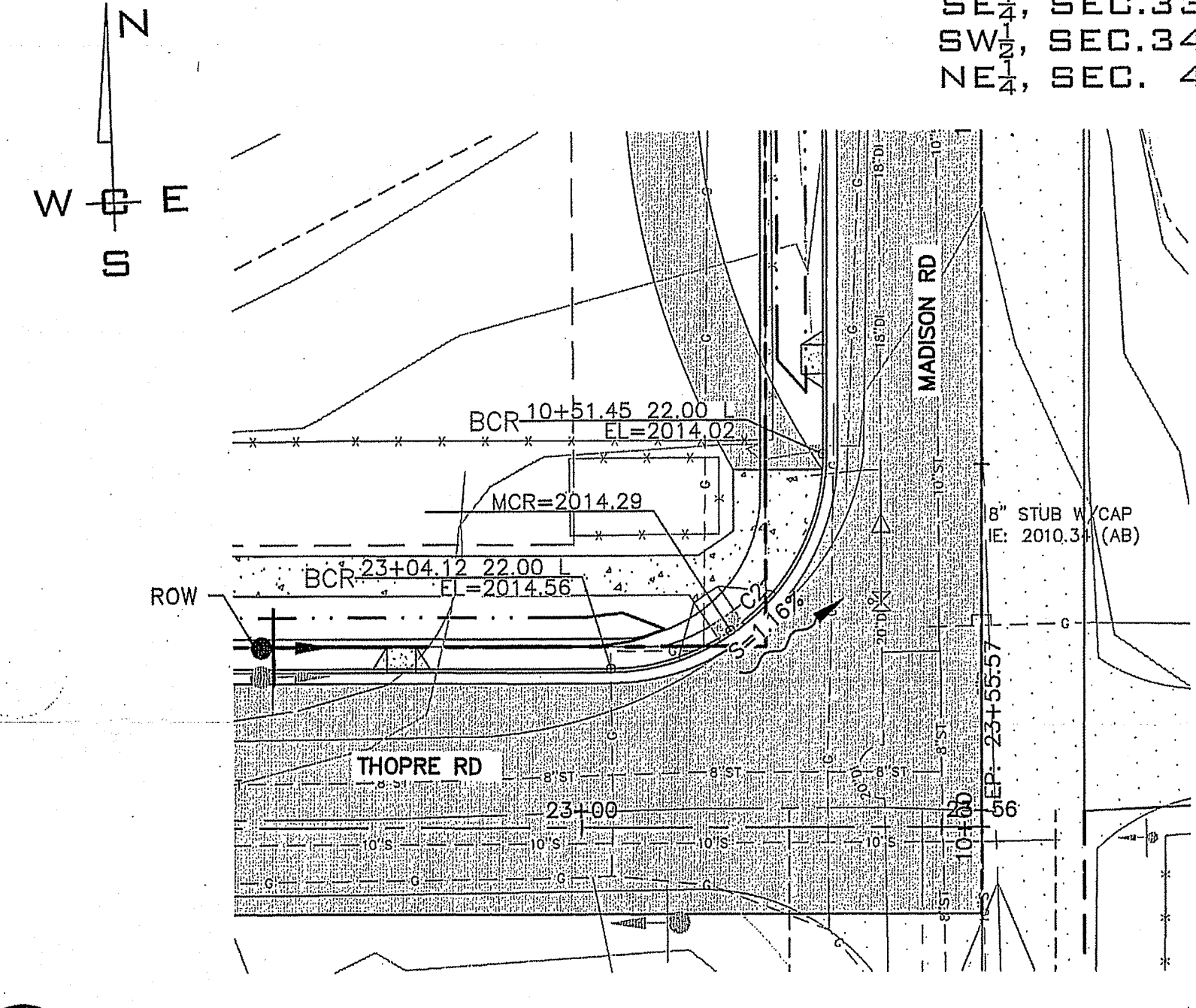
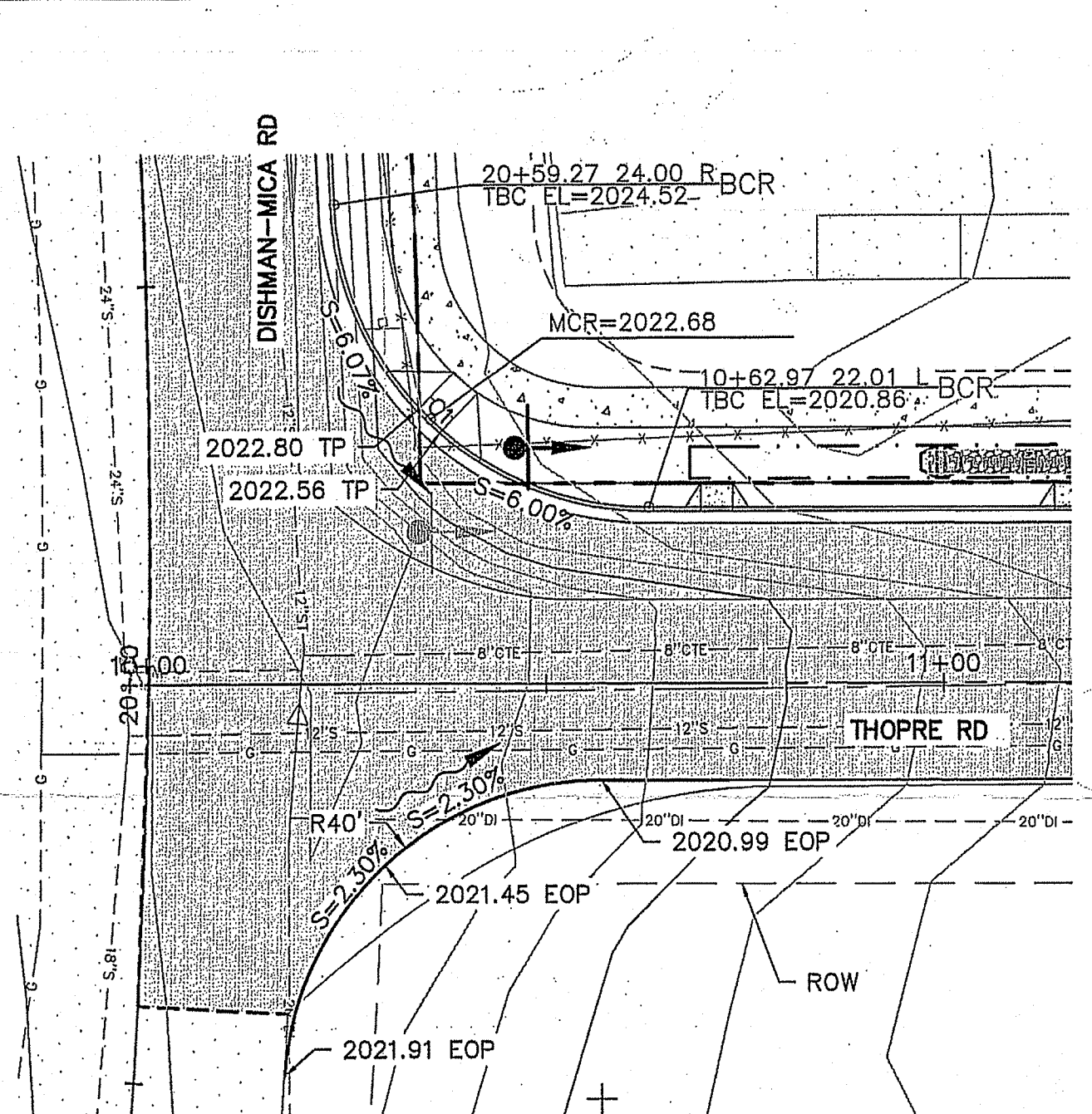
City of Spokane Valley Project/Permit No.:  
 SUB-2015-0001 (Subdivision)  
 FPD-2016-0007 (Flood Plain Development)  
 EGR-2016-0066 (Engineered Grading)

City of Spokane Valley Development Engineering  
 Review: New Street Miles - Public:  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



SE $\frac{1}{4}$ , SEC.33, T.25N., R.44E., W.M.  
 SW $\frac{3}{4}$ , SEC.34, T.25N., R.44E., W.M.  
 NE $\frac{1}{4}$ , SEC. 4, T.24N., R.44E., W.M.

**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG

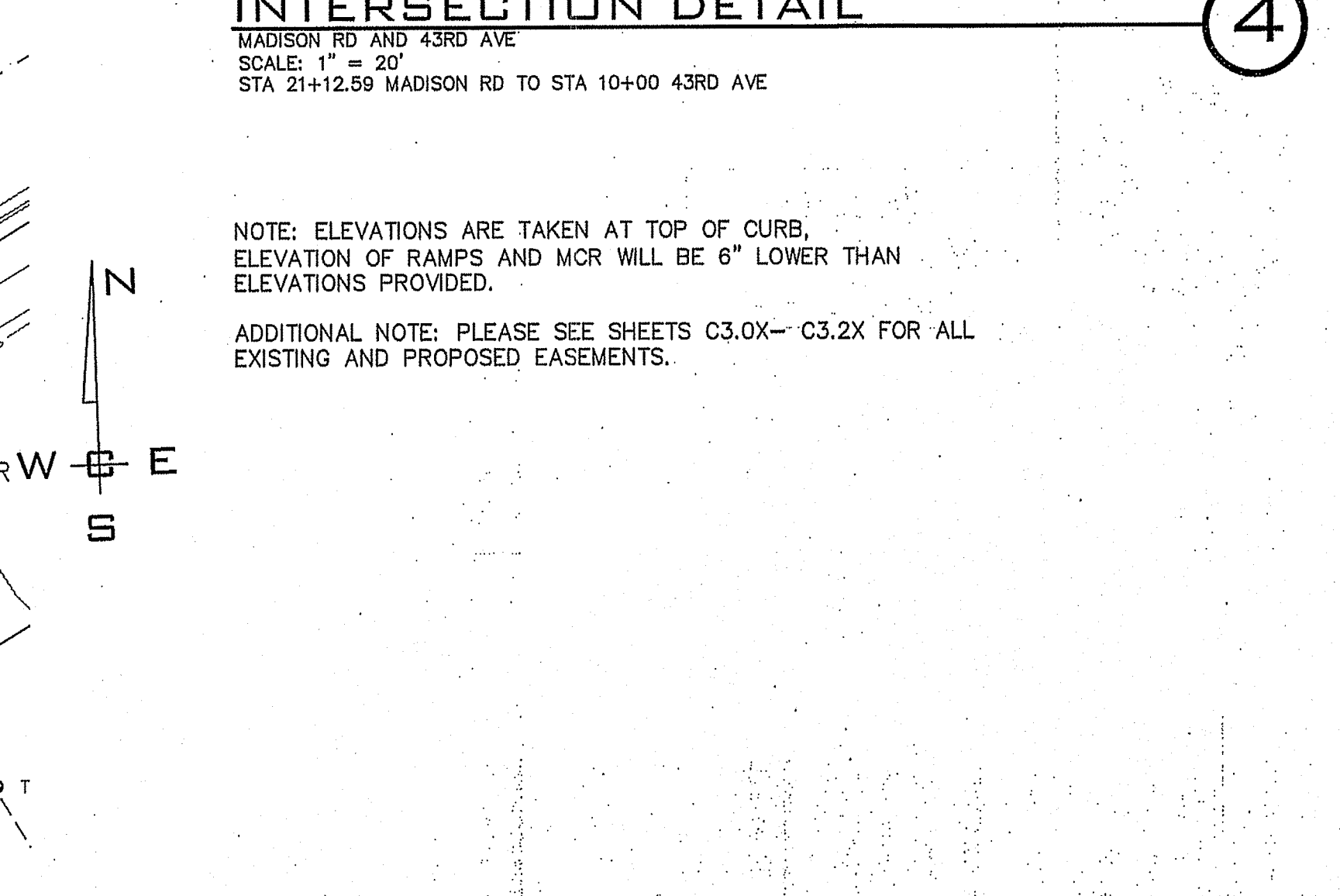
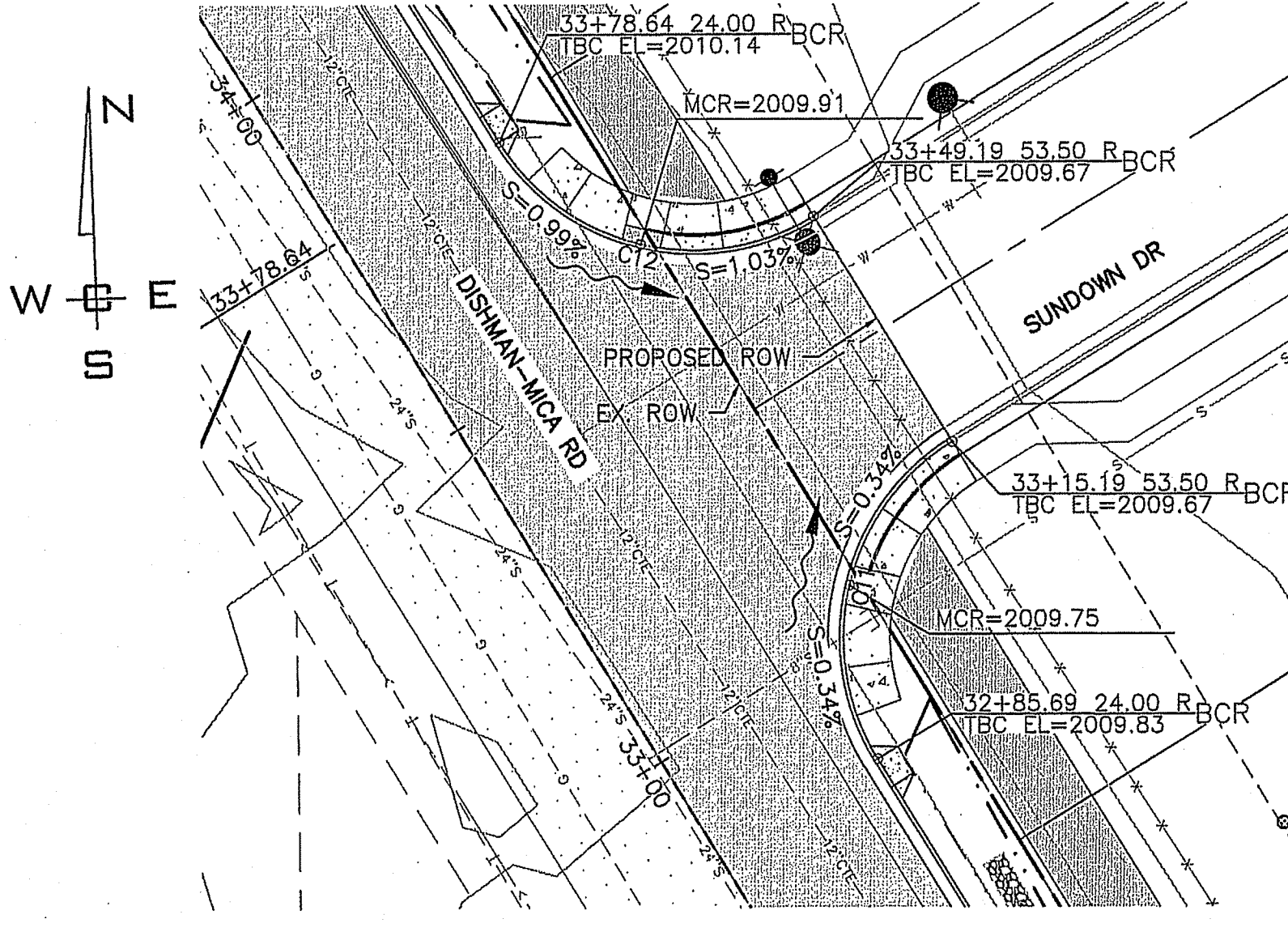
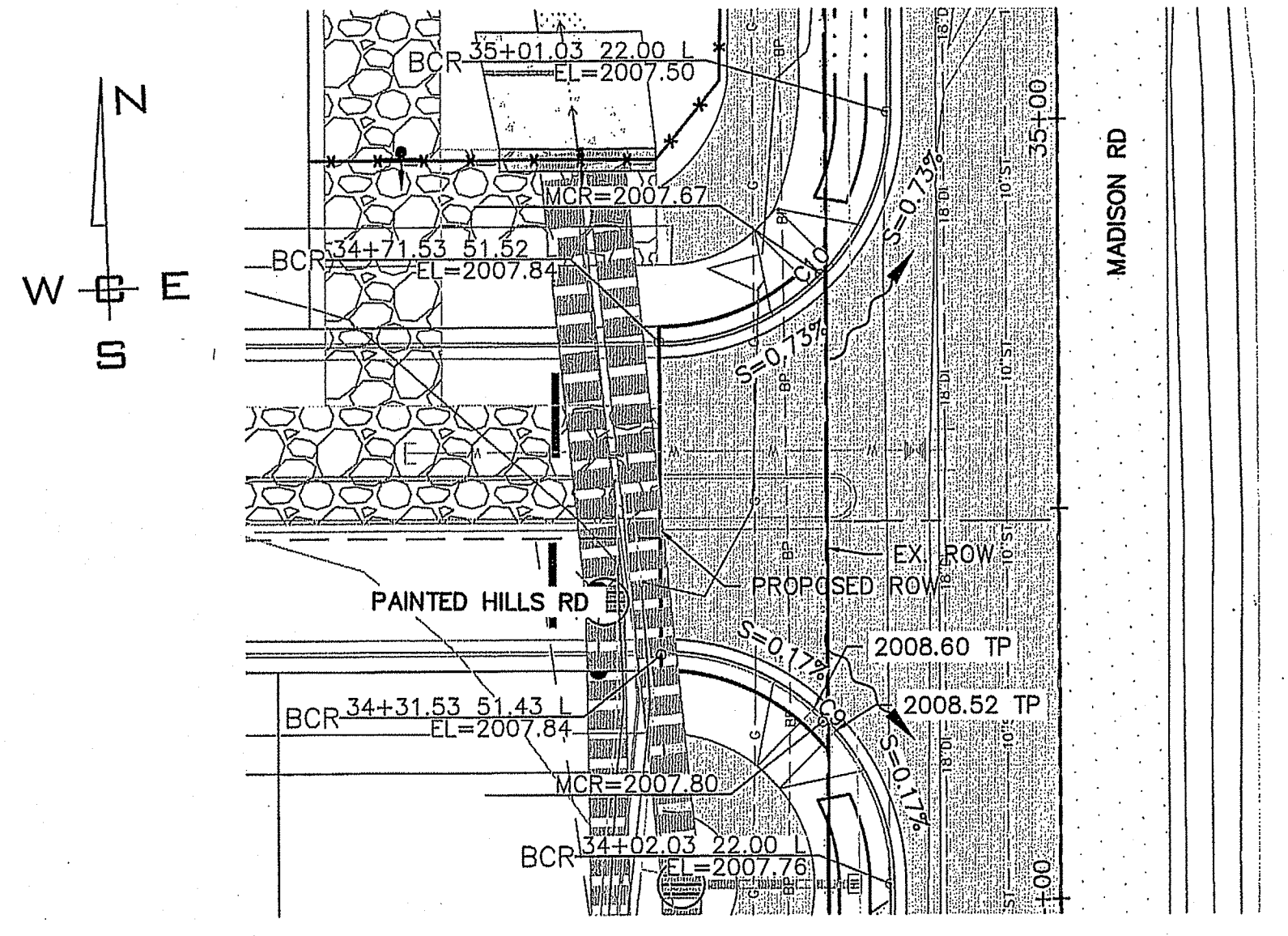
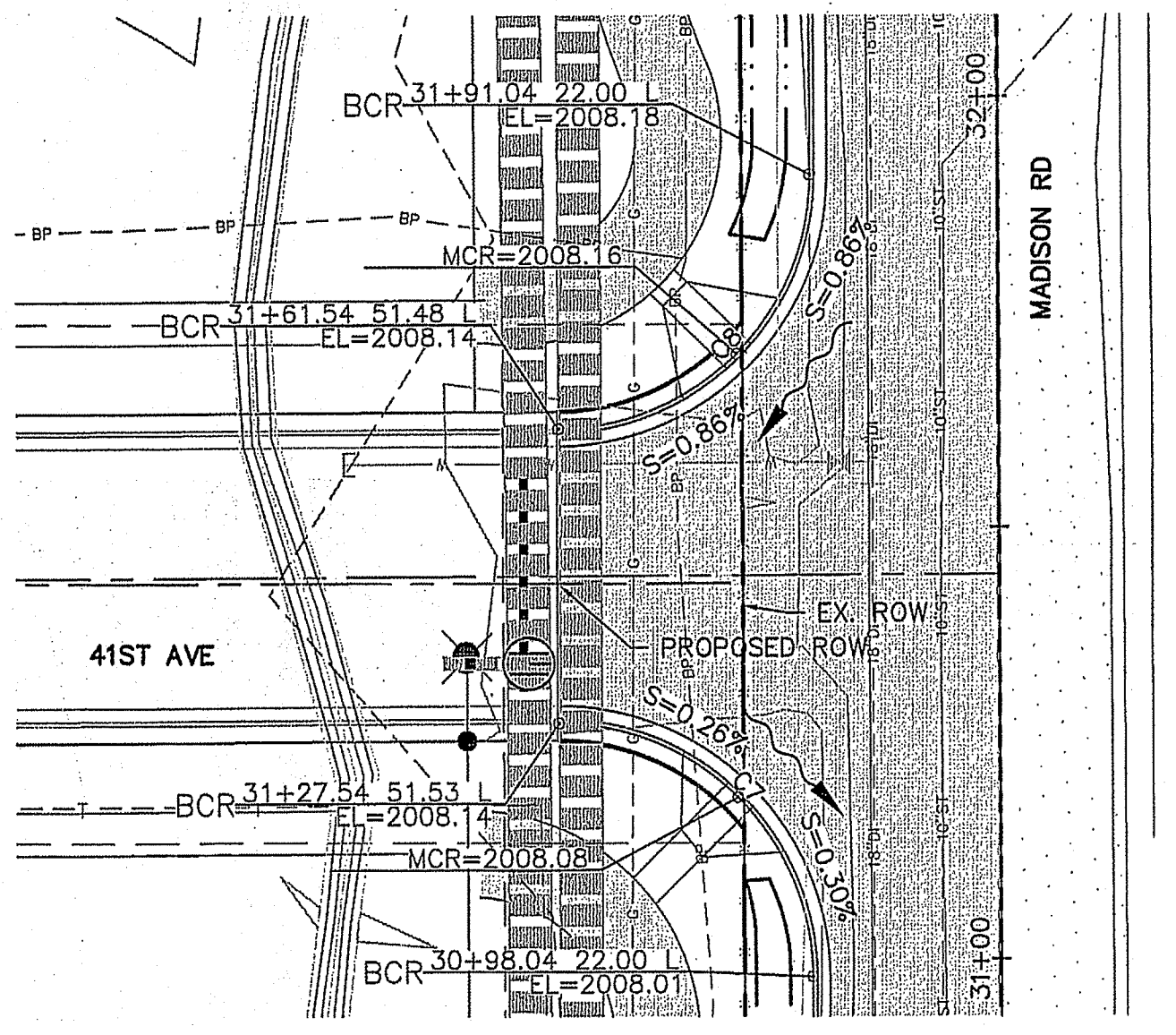


**INTERSECTION DETAIL**  
 DISHMAN-MICA RD AND THORPRE RD  
 SCALE: 1" = 20'  
 STA 20+00 DISHMAN-MICA RD TO STA 10+00 THORPRE RD

**INTERSECTION DETAIL**  
 MADISON RD AND THORPRE RD  
 SCALE: 1" = 20'  
 STA 23+55.57 THORPRE RD TO STA 10+00.00 MADISON RD

**INTERSECTION DETAIL**  
 MADISON RD AND 44TH AVE  
 SCALE: 1" = 20'  
 STA 15+18.59 MADISON RD TO STA 10+00 44TH AVE

**INTERSECTION DETAIL**  
 MADISON RD AND 43RD AVE  
 SCALE: 1" = 20'  
 STA 21+12.59 MADISON RD TO STA 10+00 43RD AVE



**INTERSECTION DETAIL**  
 MADISON RD AND 41ST AVE  
 SCALE: 1" = 20'  
 STA 31+44.59 MADISON RD TO STA 10+00.00 41ST AVE

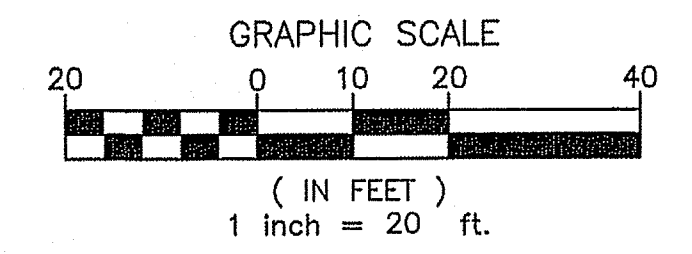
**INTERSECTION DETAIL**  
 MADISON RD AND PAINTED HILLS RD  
 SCALE: 1" = 20'  
 STA 34+84.50 MADISON RD TO STA 10+00 PAINTED HILLS RD

**INTERSECTION DETAIL**  
 DISHMAN-MICA RD AND SUNDOWN RD  
 SCALE: 1" = 20'  
 STA 33+32.19 DISHMAN-MICA RD TO STA 10+00 SUNDOWN RD

**INTERSECTION DETAIL**  
 DISHMAN-MICA RD AND SUNDOWN RD  
 SCALE: 1" = 20'  
 STA 33+32.19 DISHMAN-MICA RD TO STA 10+00 SUNDOWN RD

NOTE: ELEVATIONS ARE TAKEN AT TOP OF CURB,  
 ELEVATION OF RAMPS AND MCR WILL BE 6" LOWER THAN  
 ELEVATIONS PROVIDED.  
 ADDITIONAL NOTE: PLEASE SEE SHEETS C3.0X-C3.2X FOR ALL  
 EXISTING AND PROPOSED EASEMENTS.

| Curve # | Length | Radius | Delta |
|---------|--------|--------|-------|
| C1      | 60.65  | 39.50  | 87.98 |
| C2      | 46.31  | 29.50  | 89.95 |
| C3      | 46.36  | 29.50  | 90.05 |
| C4      | 46.31  | 29.50  | 89.95 |
| C5      | 46.36  | 29.50  | 90.05 |
| C6      | 46.31  | 29.50  | 89.95 |
| C7      | 46.36  | 29.50  | 90.05 |
| C8      | 46.31  | 29.50  | 89.95 |
| C9      | 46.27  | 29.50  | 89.87 |
| C10     | 46.36  | 29.50  | 90.03 |
| C11     | 46.34  | 29.50  | 90.00 |
| C12     | 46.34  | 29.50  | 90.00 |

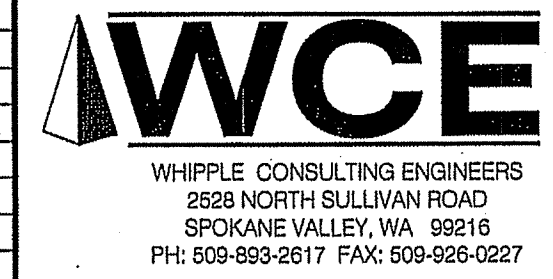


\*RADIUS IS MEASURED TO BACK OF CURB

**DATUM: NAVD - 88**  
 TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD88) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

|                    |                 |   |
|--------------------|-----------------|---|
| <b>SCALE:</b>      | PROJ #: 13-1166 | <input checked="" type="checkbox"/> CIVIL |
| <b>HORIZONTAL:</b> | DATE: 08/14/18  | <input type="checkbox"/> STRUCTURAL       |
| <b>VERTICAL:</b>   | DRAWN: JPP      | <input type="checkbox"/> SURVEYING        |
| N/A                | REVIEWED: TRW   | <input type="checkbox"/> TRAFFIC          |
|                    |                 | <input type="checkbox"/> PLANNING         |
|                    |                 | <input type="checkbox"/> LANDSCAPE        |
|                    |                 | <input type="checkbox"/> OTHER            |



**SPOKANE VALLEY PAINTED HILLS PRD**  
**INTERSECTION DETAILS**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0086  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewed: \_\_\_\_\_  
 New Street Miles - Public: \_\_\_\_\_

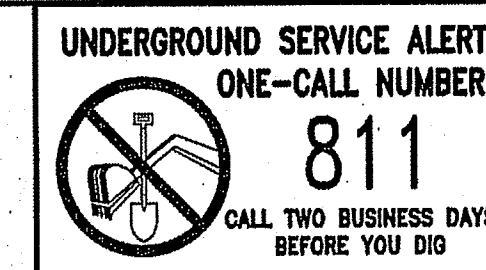
Not Reviewed  
 Reviewed for Conformance to  
 Street Standards and  
 Accepted per Chapter 1.2  
 Date Accepted \_\_\_\_\_  
 Acceptance Comments \_\_\_\_\_

**PLANS NOT APPROVED BY AGENCY**

**SHEET C3.30**

JOB NUMBER  
**13-1166**

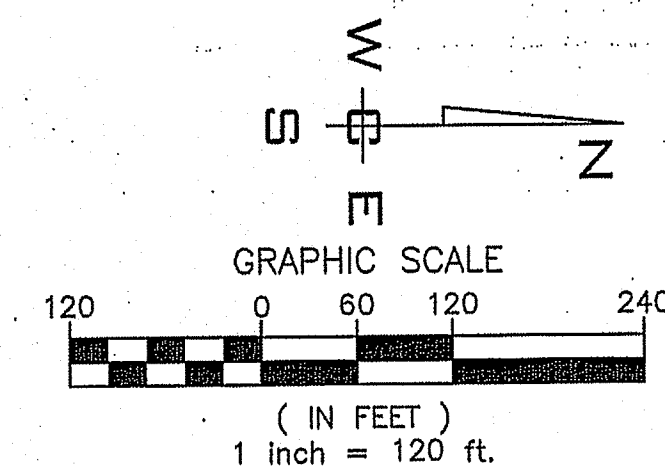
SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



4534.9060  
 4027 S. WILBUR  
 THE CARMEL OF THE  
 HOLY TRINITY

**QUANTITIES**

CUT: 63,294 CY  
 FILL: 391,583 CY  
 NET: 328,289 CY



4407-9116  
 4515 S. MADISON RD.  
 ROBERT & JOYCE HOLVEN

4534.9099 WILLIAM & BARBARA SPENCER  
 4001 S. MADISON RD.  
 4534.9093 A JOHN & LORRI CARIZO  
 4021 S. MADISON RD.  
 4534.9094 MICHAEL & POMEROY WACHER  
 4105 S. MADISON RD.  
 4534.9085 MICHAEL & MARLENE MALMES SCHOENLEBER  
 4125 S. MADISON RD. 208 S. HORIZON HILL  
 4534.9086  
 4534.9033 LORRAINE HIGUCHI TODD & CANDACE GROPP  
 415 S. MADISON RD. 4219 S. MADISON RD.  
 4534.9033  
 4534.9058 D.L. PAVELICH  
 4311 S. MADISON RD.  
 4534.9058 DARYL ARNEY AND SKILLY JOHNSTON  
 4223 S. MADISON RD. 427 S. MADISON RD. & DIANE PAXTON  
 4534.9097  
 44032.9151

DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
|     |      |    |           |
|     |      |    |           |
|     |      |    |           |
|     |      |    |           |

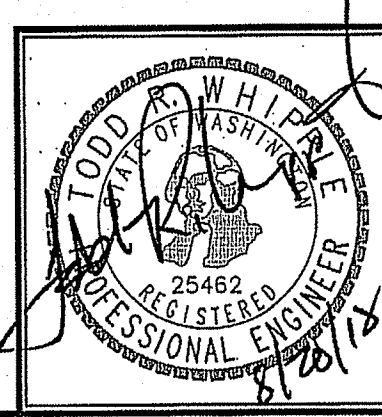
**SCALE:**  
 HORIZONTAL:  
 1" = 120'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 11/01/17  
 DRAWN: JPP  
 REVIEWED: TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER

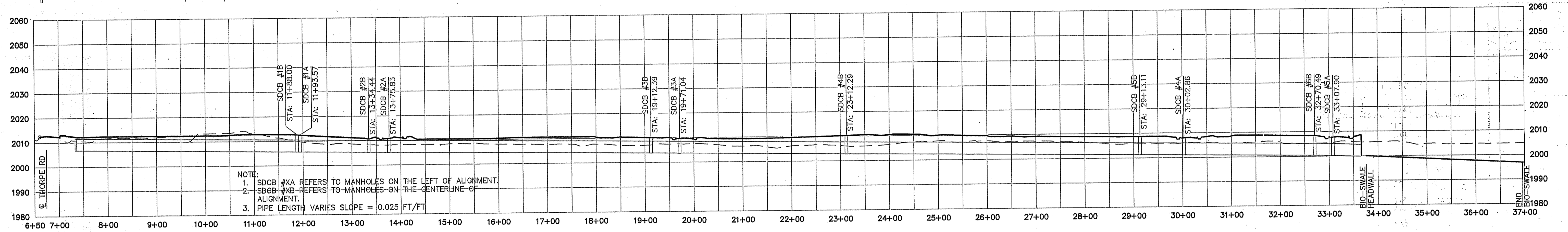
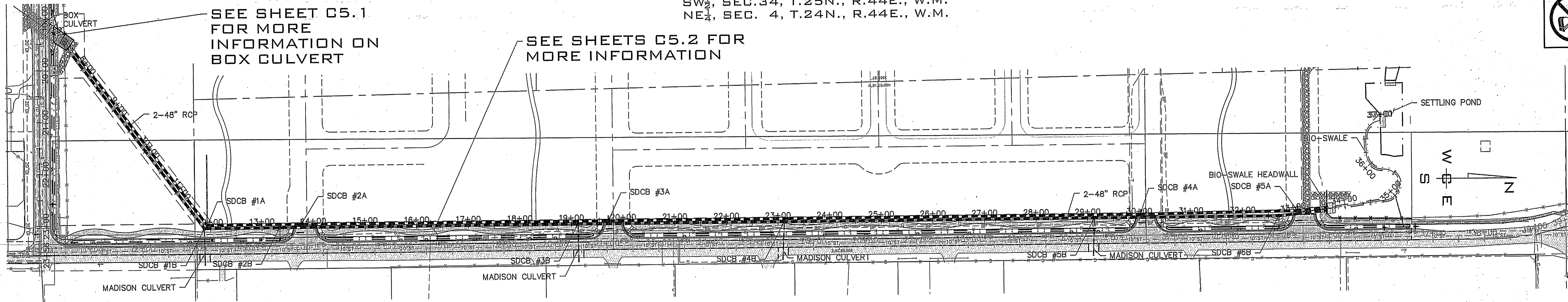
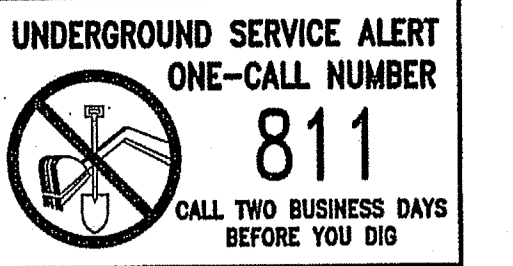


**PAINTED HILLS  
 GRADING PLAN  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

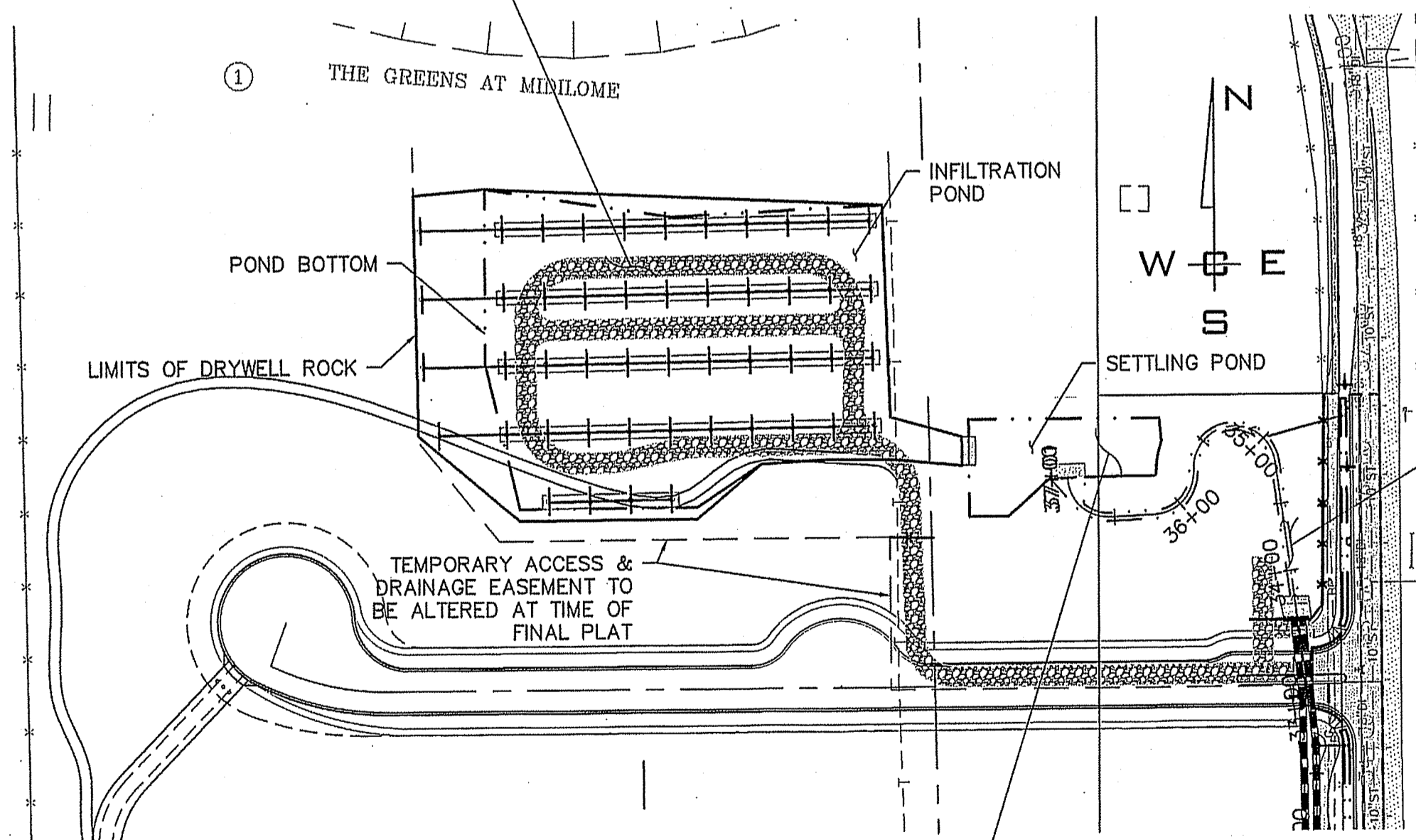


**SHEET  
 C4.0**  
 JOB NUMBER  
**13-1166**

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

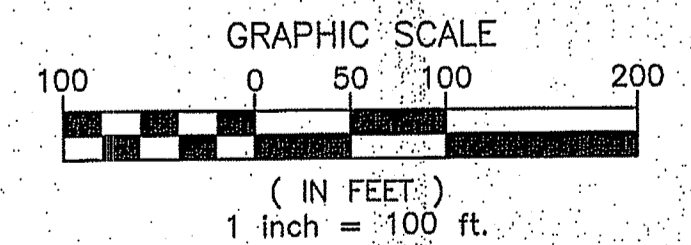


SEE SHEET C5.3 FOR MORE INFORMATION



SEE SHEET C5.3 FOR MORE INFORMATION

SEE SHEETS C5.5 FOR MORE INFORMATION

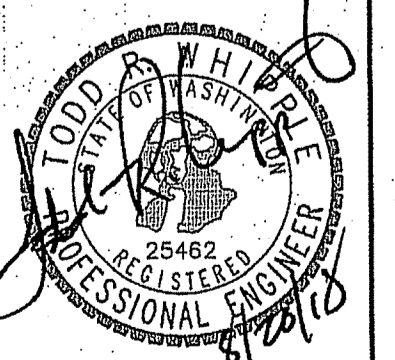


PLANS NOT APPROVED BY AGENCY

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Review:  
 New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



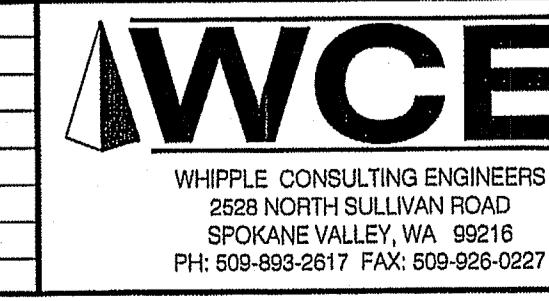
DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

SCALE:  
 HORIZONTAL:  
 1"=100'  
 VERTICAL:  
 1"=20'

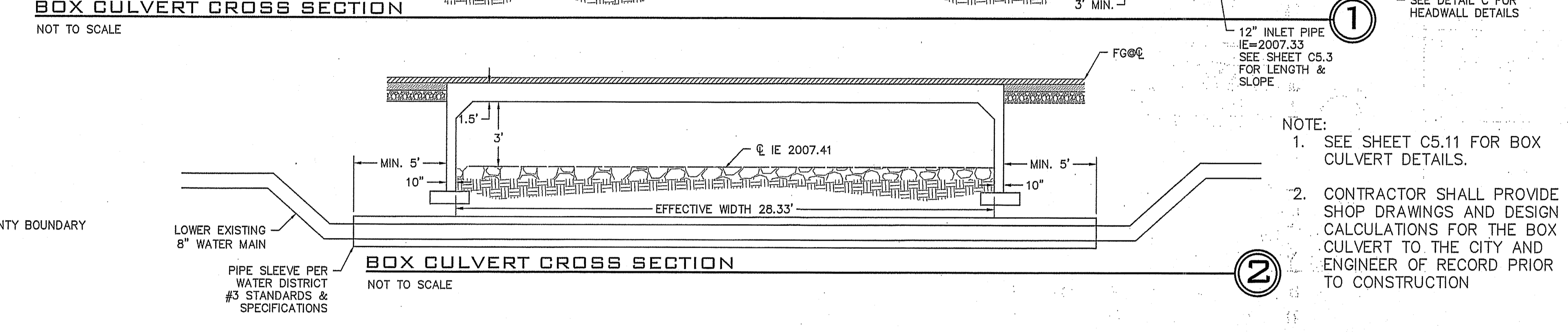
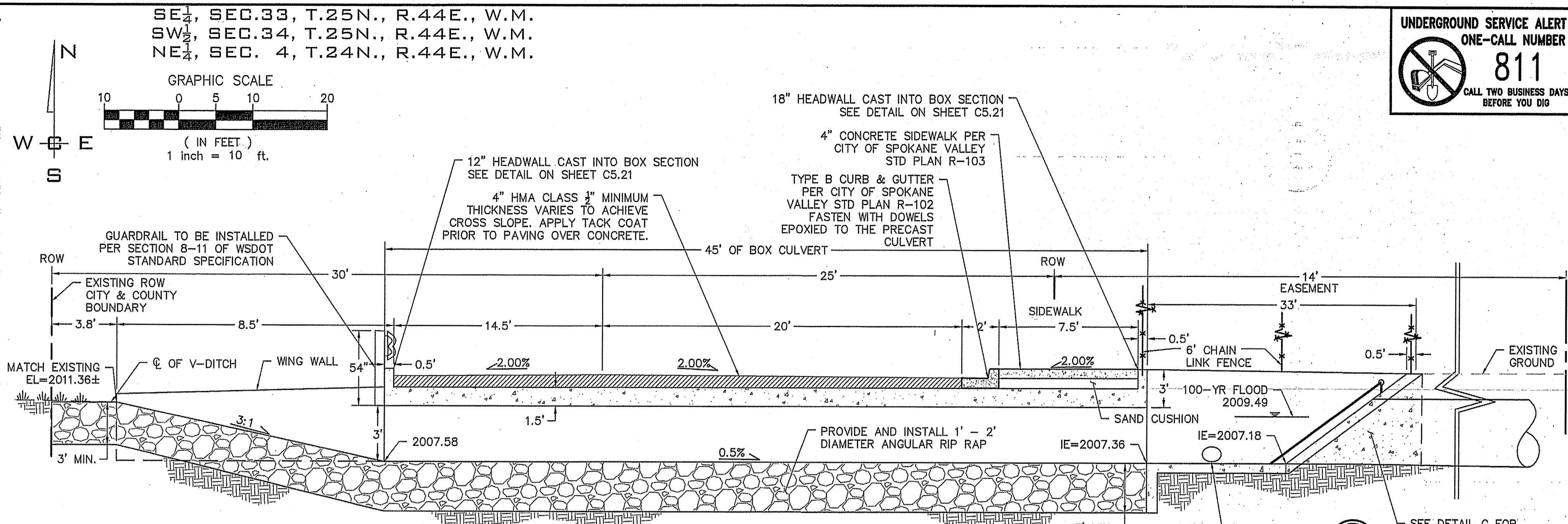
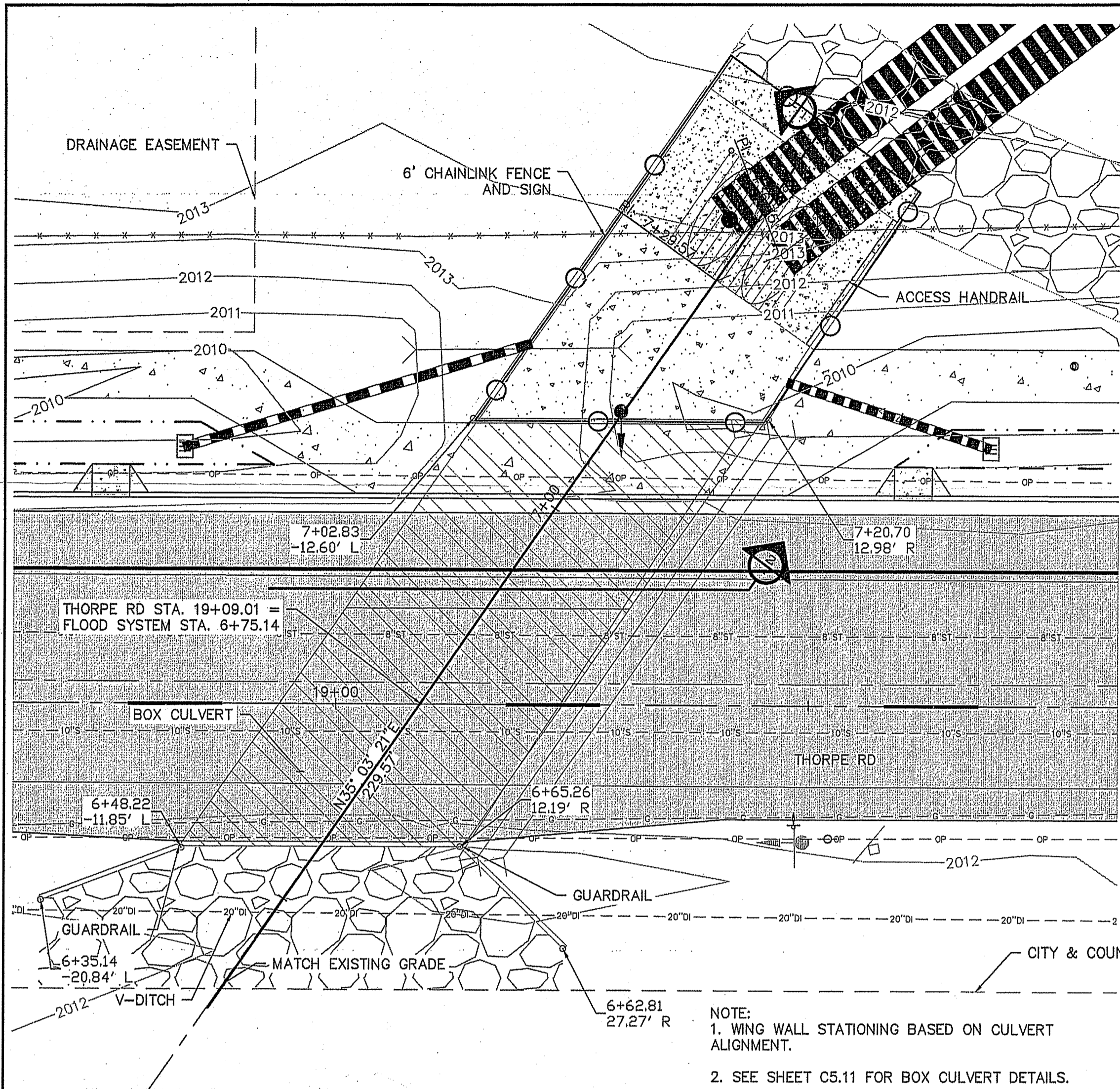
PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

CIVIL  
 STRUCTURAL  
 SURVEYING  
 TRAFFIC  
 PLANNING  
 LANDSCAPE  
 OTHER

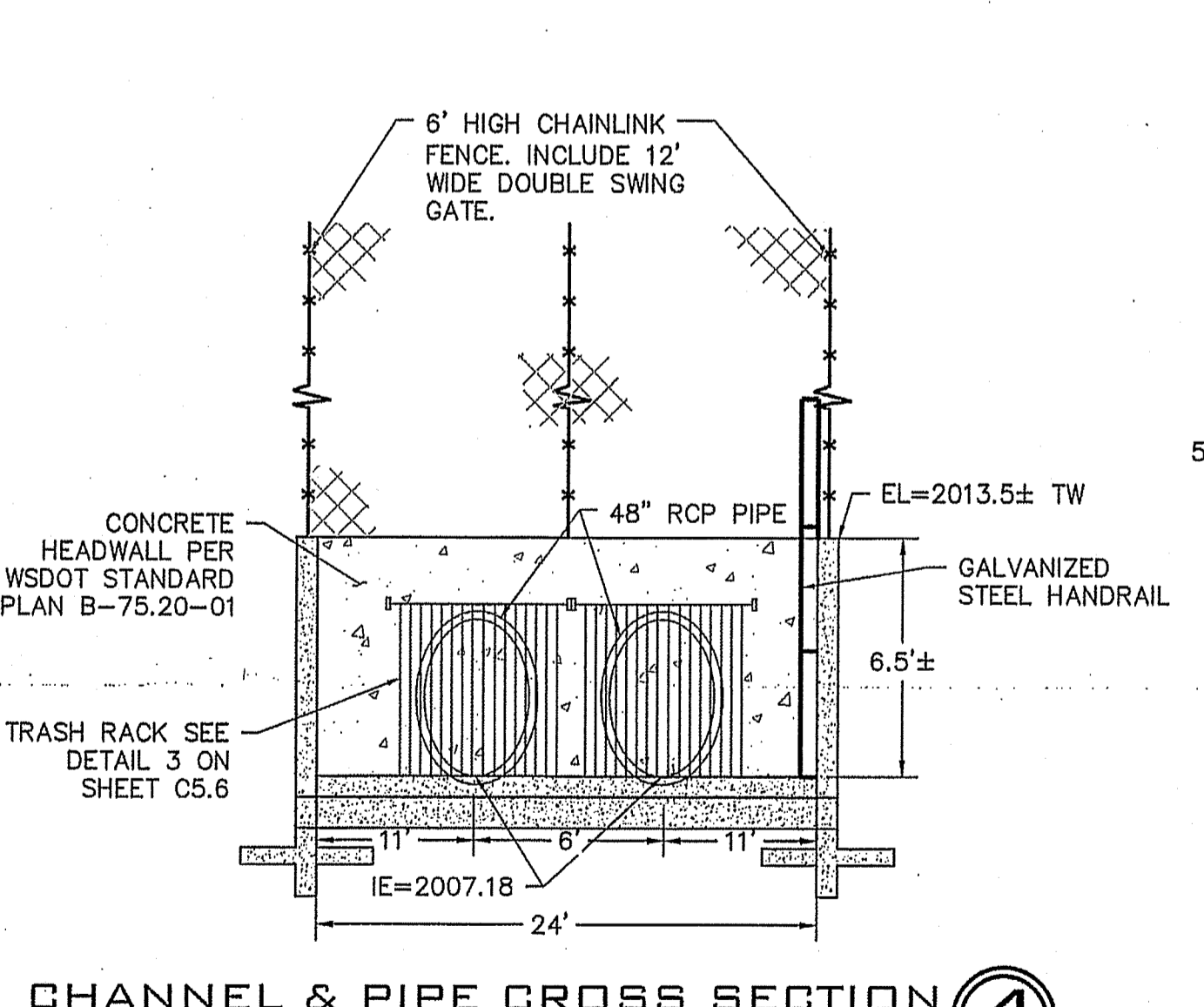
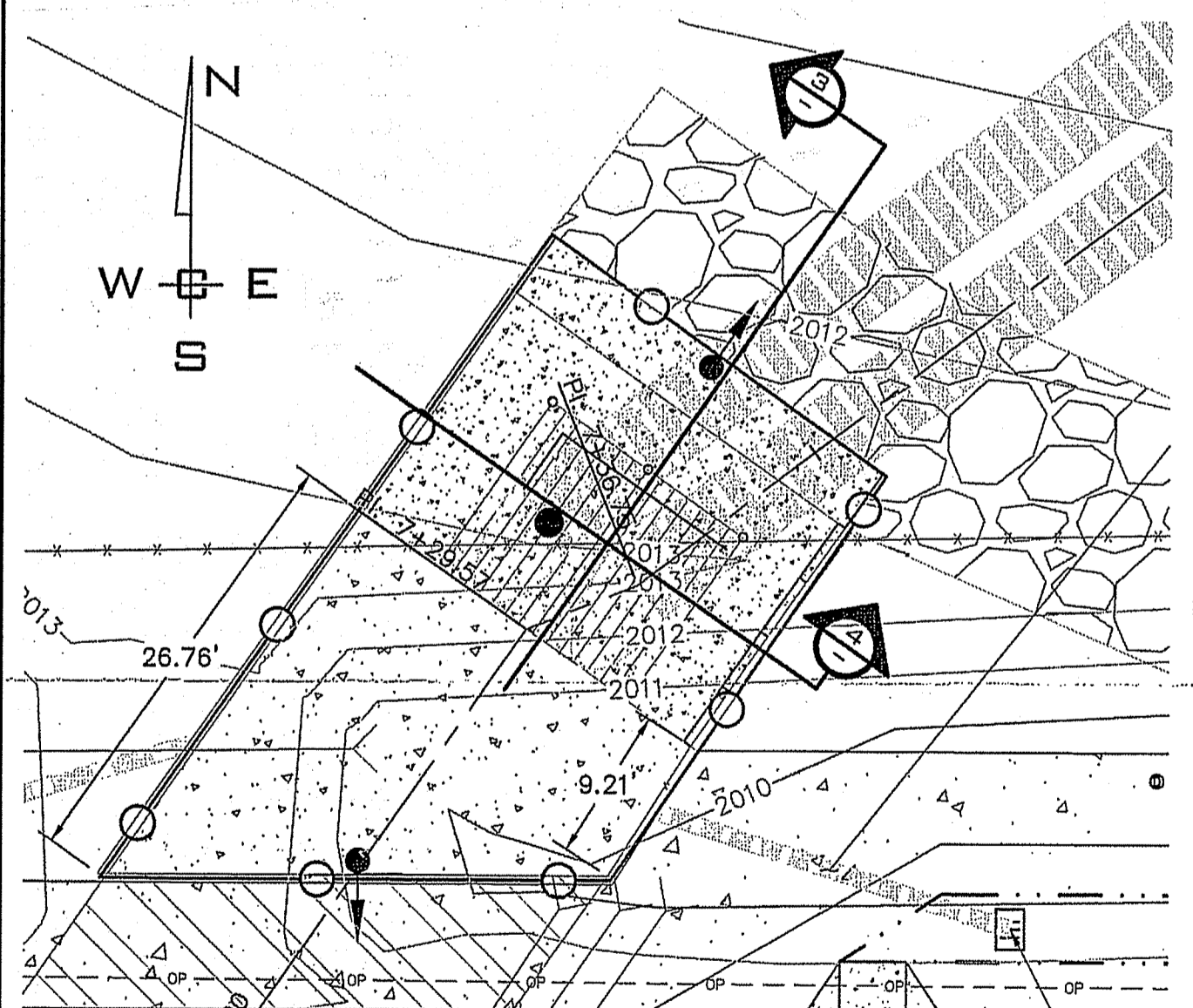


**SPOKANE VALLEY PAINTED HILLS PRD  
 STORM SYSTEM OVERVIEW  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET C5.0**  
 JOB NUMBER  
**13-1166**



**BOX CULVERT DETAIL**  
SCALE: 1"=10'

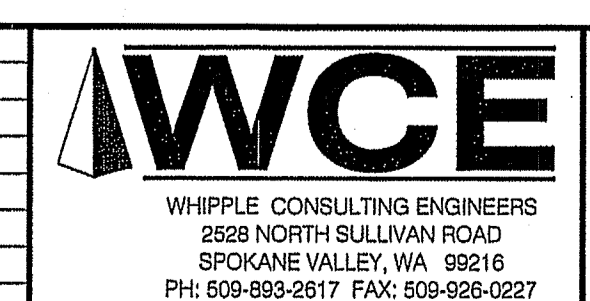


**PLAN VIEW**  
SCALE: 1"=10'  
**CHANNEL & PIPE CONNECTION**  
SCALE: 1"=10'

DATUM: NAVD - 88  
TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.87 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

|                        |                        |   |
|------------------------|------------------------|---|
| <b>SCALE:</b>          | <b>PROJ #:</b> 13-1166 | <input checked="" type="checkbox"/> CIVIL |
| <b>HORIZONTAL:</b> N/A | <b>DATE:</b> 08/14/18  | <input type="checkbox"/> STRUCTURAL       |
| <b>VERTICAL:</b> N/A   | <b>DRAWN:</b> JPP      | <input type="checkbox"/> SURVEYING        |
|                        | <b>REVIEWED:</b> TRW   | <input type="checkbox"/> TRAFFIC          |
|                        |                        | <input type="checkbox"/> PLANNING         |
|                        |                        | <input type="checkbox"/> LANDSCAPE        |
|                        |                        | <input type="checkbox"/> OTHER            |



**SPokane Valley Painted Hills PRD**  
**BOX CULVERT-CHANNEL-PIPE PLAN**  
**DISHMAN-MICA RD.**  
**SPokane Valley, WA**

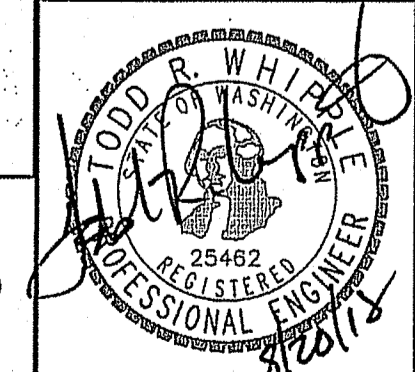
**SHEET C5.10**  
JOB NUMBER 13-1166

**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER 811**  
CALL TWO BUSINESS DAYS BEFORE YOU DIG

**FLOOD CONTROL FACILITY**  
PLEASE REPORT ANY OBSERVED POTENTIAL MAINTENANCE OR FUNCTIONAL ISSUES TO THE PAINTED HILLS HOA  
(509) 623-1000

**FLOOD FACILITY SIGN**  
12" X 18"  
BLACK LETTERS ON WHITE BACKGROUND  
**SIGN DETAIL A.3**  
NOT TO SCALE

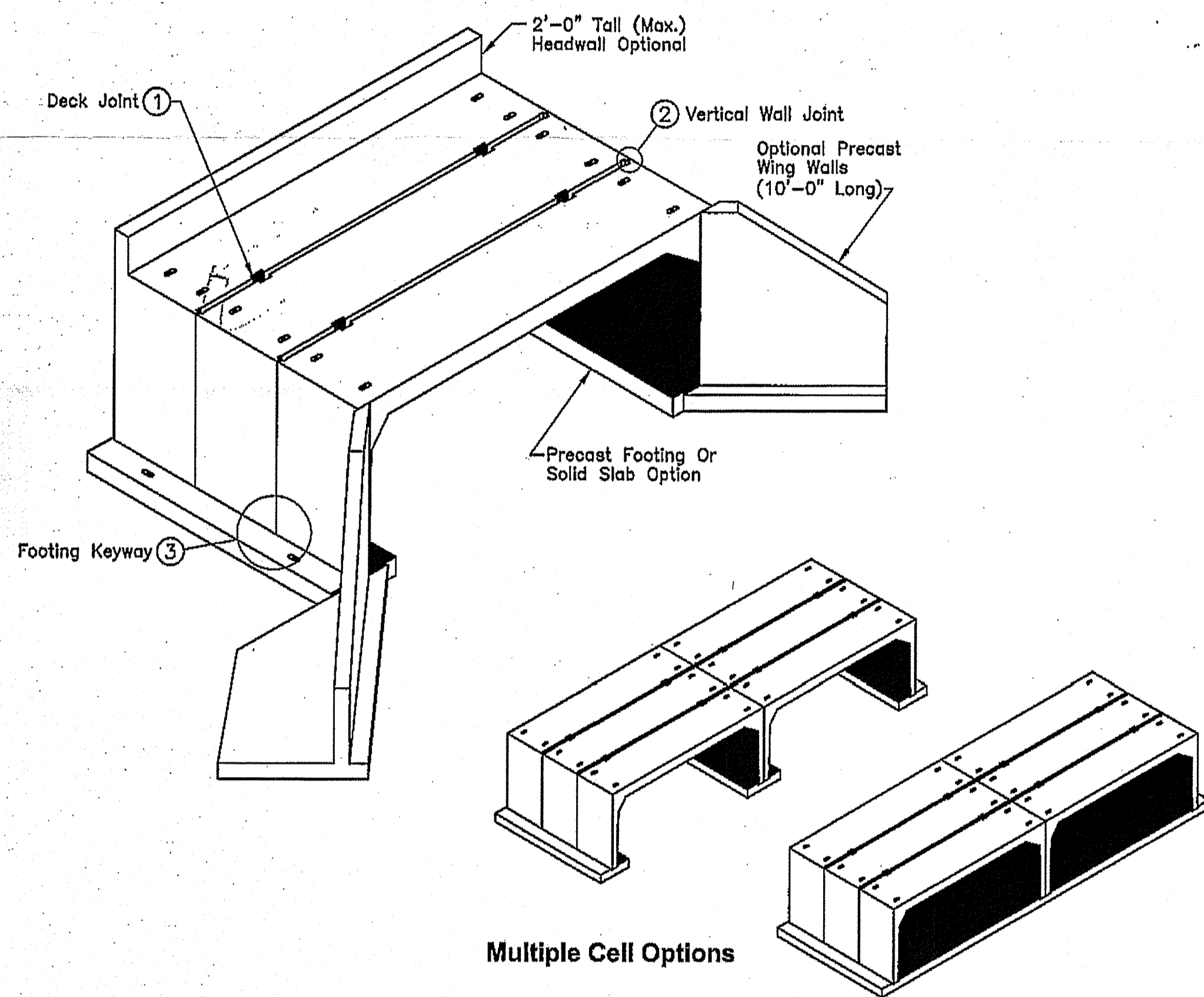
**PLANS NOT APPROVED BY AGENCY**



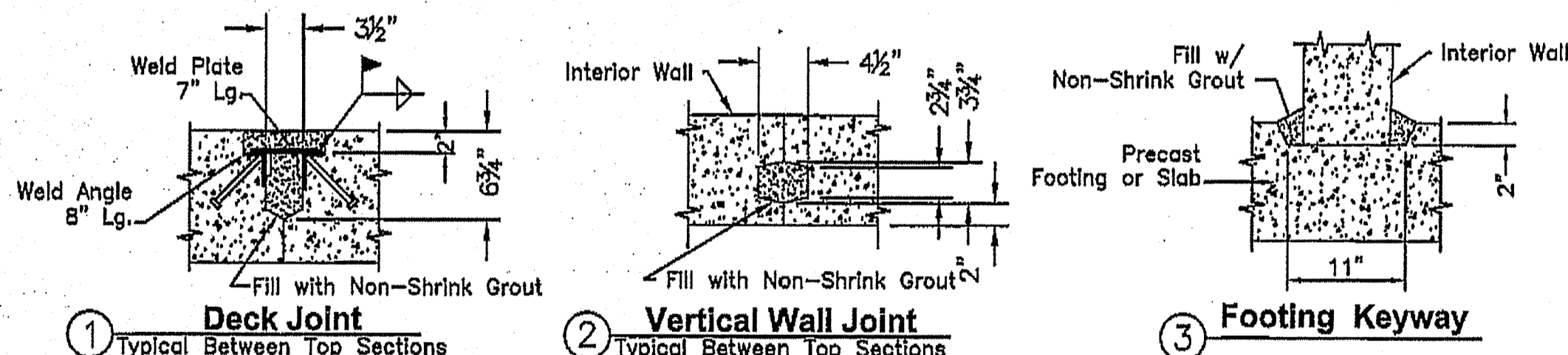


SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

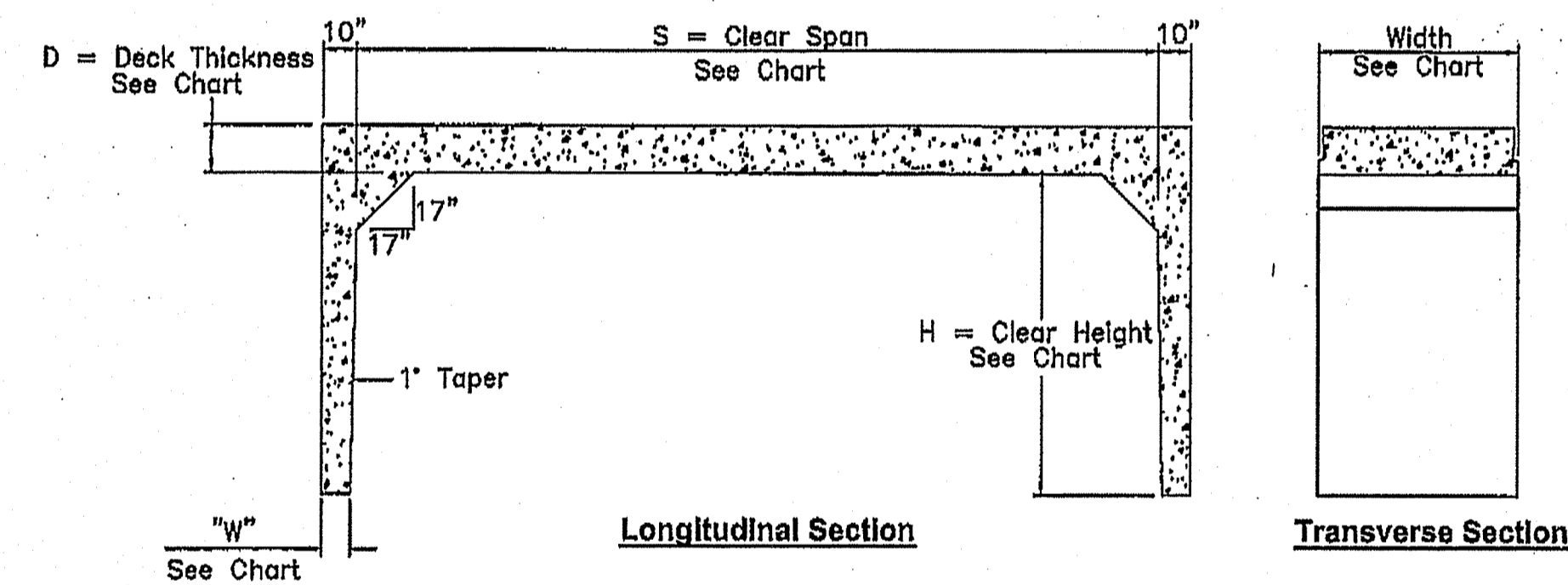
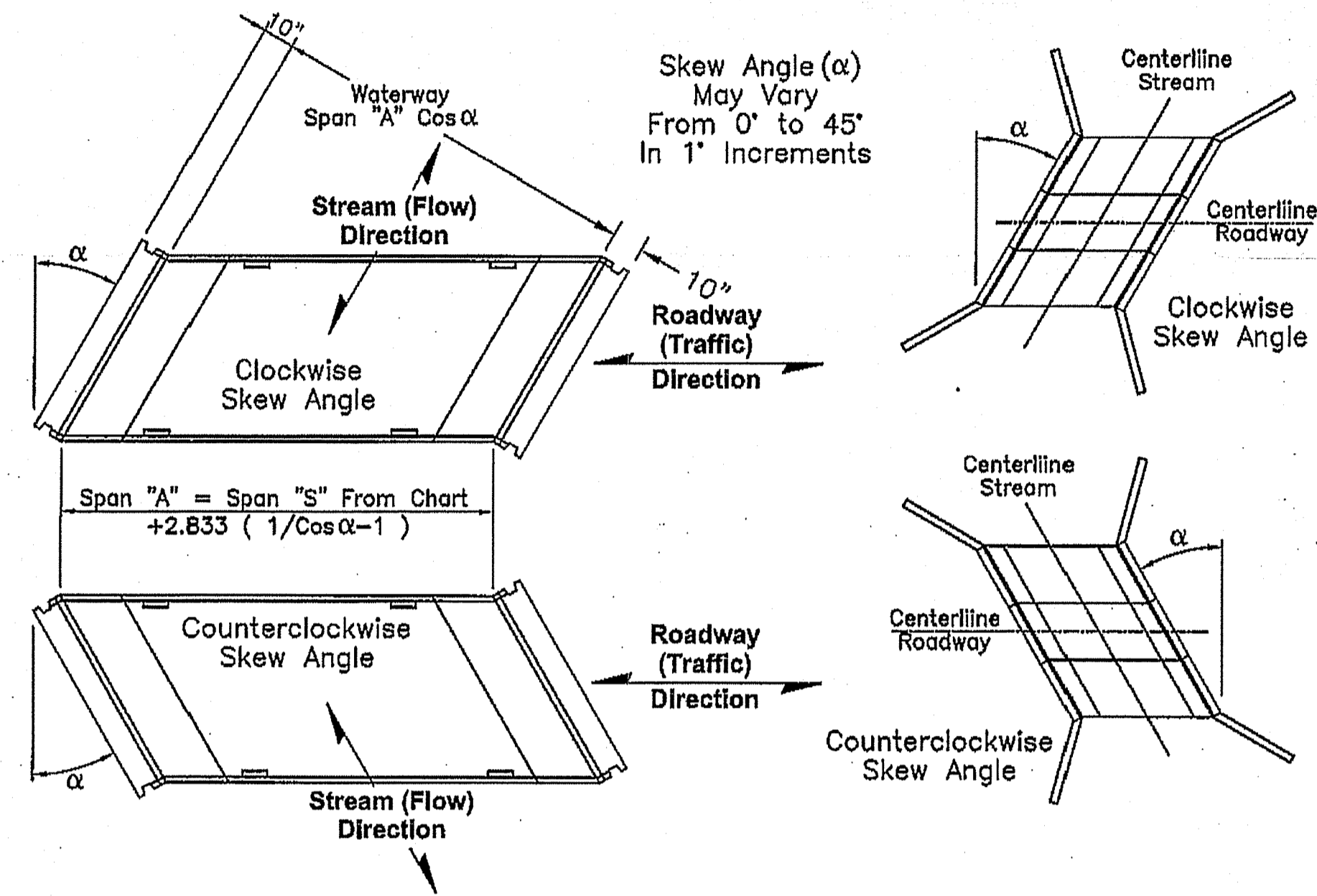
**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



Multiple Cell Options



Designed For HS-20 Or HS-25 Loads As Specified  
 (Heavier Loads Available Upon Request)



Sizing And Weights (KIPs) for Standard Product

| SPAN Ft. | S     | 10'-0" Width Product |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 5'-0" Width Product |      |      |      |      |      |      |      |     |  |  |  |  |  |  |  |  |
|----------|-------|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------|------|------|------|------|------|------|------|-----|--|--|--|--|--|--|--|--|
|          |       | 10'                  | 11'  | 12'  | 13'  | 14'  | 15'  | 16'  | 17'  | 18'  | 19'  | 20'  | 21'  | 22'  | 23'  | 24'  | 25'  | 26'  | 27'                 | 28'  | 29'  | 30'  | 31'  | 32'  | 33'  | 34'  | 35' |  |  |  |  |  |  |  |  |
| DECK In. | D     | 10"                  | 10"  | 10"  | 10"  | 10"  | 10"  | 10"  | 10"  | 10"  | 10"  | 10"  | 14"  | 14"  | 14"  | 14"  | 14"  | 14"  | 14"                 | 18"  | 18"  | 18"  | 18"  | 18"  | 18"  | 18"  | 18" |  |  |  |  |  |  |  |  |
| W=9 5/8" | H=3"  | 25.2                 | 26.4 | 27.6 | 28.8 | 30.0 | 31.2 | 32.4 | 33.6 | 34.8 | 36.0 | 37.2 | 38.4 | 39.6 | 40.8 | 42.0 | 43.2 | 44.4 | 45.6                | 46.8 | 48.0 | 49.2 | 50.4 | 51.6 | 52.8 | 54.0 |     |  |  |  |  |  |  |  |  |
| W=9 3/8" | H=4"  | 27.4                 | 28.6 | 29.8 | 31.0 | 32.2 | 33.4 | 34.6 | 35.8 | 37.0 | 38.2 | 39.4 | 40.6 | 41.8 | 43.0 | 44.2 | 45.4 | 46.6 | 47.8                | 49.0 | 50.2 | 51.4 | 52.6 | 53.8 | 55.0 | 56.2 |     |  |  |  |  |  |  |  |  |
| W=8 1/8" | H=5"  | 29.6                 | 30.8 | 32.0 | 33.2 | 34.4 | 35.6 | 36.8 | 38.0 | 39.2 | 40.4 | 41.6 | 42.8 | 44.0 | 45.2 | 46.4 | 47.6 | 48.8 | 50.0                | 51.2 | 52.4 | 53.6 | 54.8 | 56.0 | 57.2 | 58.4 |     |  |  |  |  |  |  |  |  |
| W=8 7/8" | H=6"  | 32.0                 | 33.2 | 34.4 | 35.6 | 36.8 | 38.0 | 39.2 | 40.4 | 41.6 | 42.8 | 44.0 | 45.2 | 46.4 | 47.6 | 48.8 | 50.0 | 51.2 | 52.4                | 53.6 | 54.8 | 56.0 | 57.2 | 58.4 | 59.6 | 60.8 |     |  |  |  |  |  |  |  |  |
| W=8 5/8" | H=7"  | 34.2                 | 35.4 | 36.6 | 37.8 | 39.0 | 40.2 | 41.4 | 42.6 | 43.8 | 45.0 | 46.2 | 47.4 | 48.6 | 49.8 | 51.0 | 52.2 | 53.4 | 54.6                | 55.8 | 57.0 | 58.2 | 59.4 | 60.6 | 61.8 | 63.0 |     |  |  |  |  |  |  |  |  |
| W=8 1/2" | H=8"  | 36.4                 | 37.6 | 38.8 | 40.0 | 41.2 | 42.4 | 43.6 | 44.8 | 46.0 | 47.2 | 48.4 | 49.6 | 50.8 | 52.0 | 53.2 | 54.4 | 55.6 | 56.8                | 58.0 | 59.2 | 60.4 | 61.6 | 62.8 | 64.0 | 65.2 |     |  |  |  |  |  |  |  |  |
| W=8 1/4" | H=9"  | 38.6                 | 39.8 | 41.0 | 42.2 | 43.4 | 44.6 | 45.8 | 47.0 | 48.2 | 49.4 | 50.6 | 51.8 | 53.0 | 54.2 | 55.4 | 56.6 | 57.8 | 59.0                | 60.2 | 61.4 | 62.6 | 63.8 | 65.0 | 66.2 | 67.4 |     |  |  |  |  |  |  |  |  |
| W=8"     | H=10" | 40.6                 | 41.8 | 43.0 | 44.2 | 45.4 | 46.6 | 47.8 | 49.0 | 50.2 | 51.4 | 52.6 | 53.8 | 55.0 | 56.2 | 57.4 | 58.6 | 59.8 | 61.0                | 62.2 | 63.4 | 64.6 | 65.8 | 67.0 | 68.2 | 69.4 |     |  |  |  |  |  |  |  |  |

NOTE:  
 USED A 3'X30' BOX CULVERT WITH A CLOCKWISE SKEW ANGLE

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-001  
 (Subdivision)  
 FPD-2016-007  
 (Flood Plain Development)  
 EGR-2016-066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewed:  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_

PLANS NOT APPROVED BY AGENCY

DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD23)=2009.87  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

|             |           |          |
|-------------|-----------|----------|
| SCALE:      | PROJ #:   | 13-1166  |
| HORIZONTAL: | DATE:     | 08/14/18 |
| VERTICAL:   | DRAWN:    | JPP      |
|             | REVIEWED: | TRW      |

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2828 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2817 FAX: 509-826-0227

**SPOKANE VALLEY PAINTED HILLS PRD**  
**BOX CULVERT DETAILS**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

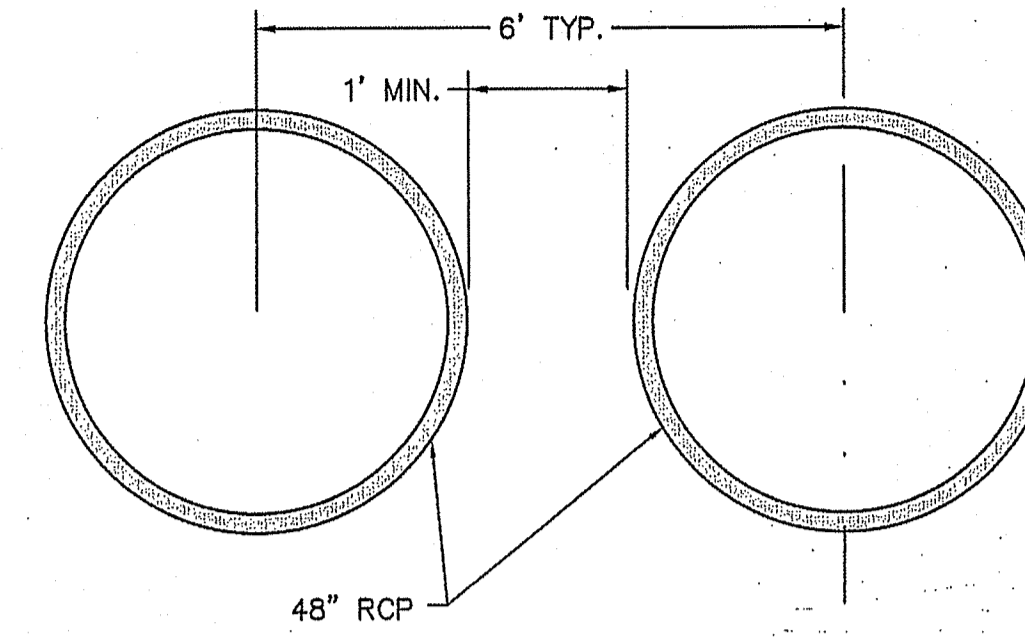
**SHEET C5.11**  
 JOB NUMBER  
**13-1166**

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

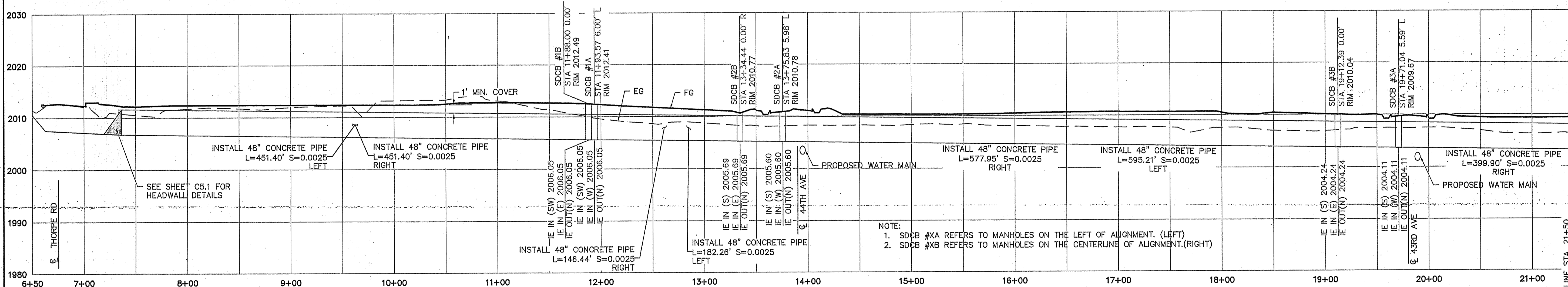
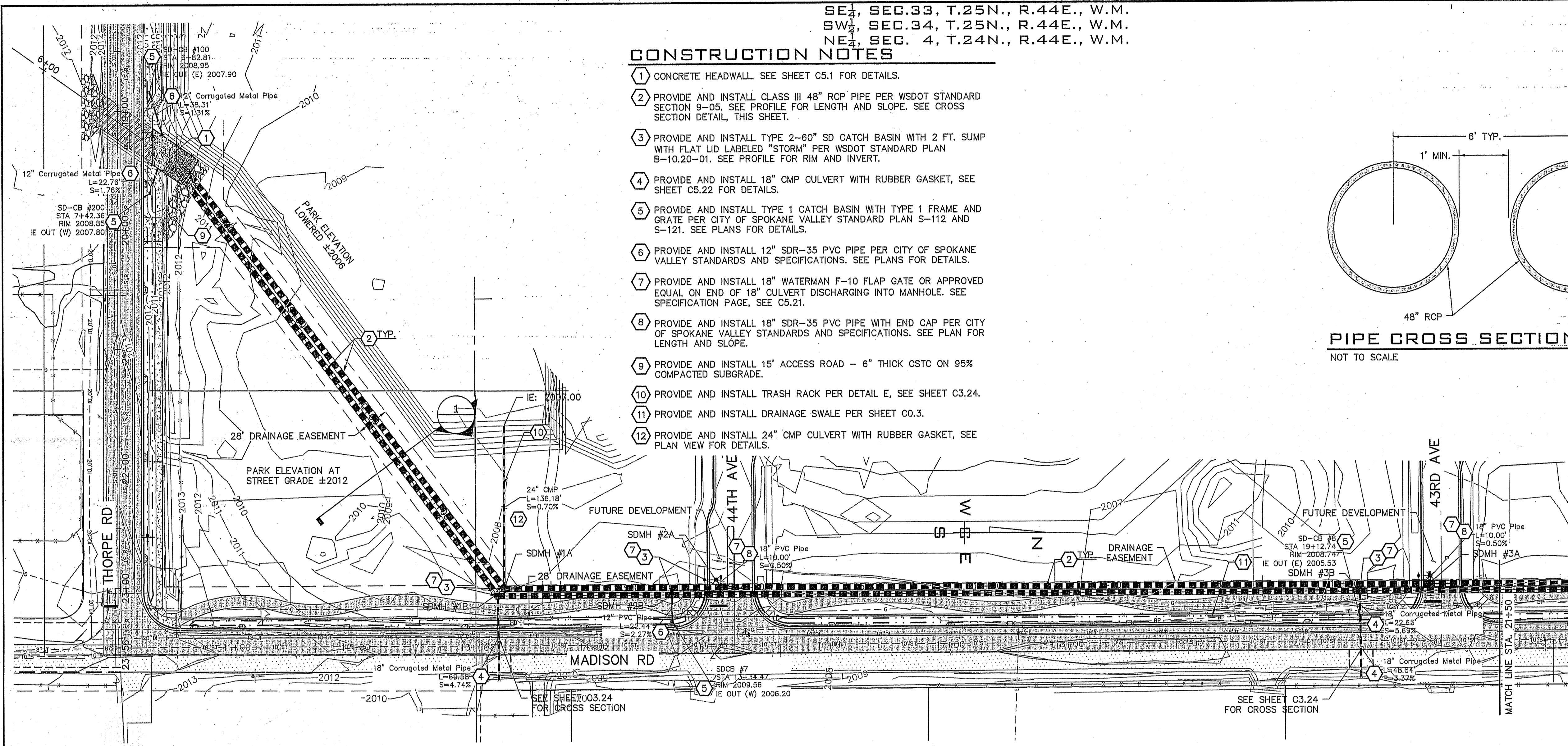
UNDERGROUND SERVICE ALERT  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG

**CONSTRUCTION NOTES**

- 1 CONCRETE HEADWALL. SEE SHEET C5.1 FOR DETAILS.
- 2 PROVIDE AND INSTALL CLASS III 48" RCP PIPE PER WSDOT STANDARD SECTION 9-05. SEE PROFILE FOR LENGTH AND SLOPE. SEE CROSS SECTION DETAIL, THIS SHEET.
- 3 PROVIDE AND INSTALL TYPE 2-60" SD CATCH BASIN WITH 2 FT. SUMP WITH FLAT LID LABELED "STORM" PER WSDOT STANDARD PLAN B-10.20-01. SEE PROFILE FOR RIM AND INVERT.
- 4 PROVIDE AND INSTALL 18" CMP CULVERT WITH RUBBER GASKET, SEE SHEET C5.22 FOR DETAILS.
- 5 PROVIDE AND INSTALL TYPE 1 CATCH BASIN WITH TYPE 1 FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112 AND S-121. SEE PLANS FOR DETAILS.
- 6 PROVIDE AND INSTALL 12" SDR-35 PVC PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE PLANS FOR DETAILS.
- 7 PROVIDE AND INSTALL 18" WATERMAN F-10 FLAP GATE OR APPROVED EQUAL ON END OF 18" CULVERT DISCHARGING INTO MANHOLE. SEE SPECIFICATION PAGE, SEE C5.21.
- 8 PROVIDE AND INSTALL 18" SDR-35 PVC PIPE WITH END CAP PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE PLAN FOR LENGTH AND SLOPE.
- 9 PROVIDE AND INSTALL 15' ACCESS ROAD - 6" THICK CSTC ON 95% COMPACTED SUBGRADE.
- 10 PROVIDE AND INSTALL TRASH RACK PER DETAIL E, SEE SHEET C3.24.
- 11 PROVIDE AND INSTALL DRAINAGE SWALE PER SHEET C0.3.
- 12 PROVIDE AND INSTALL 24" CMP CULVERT WITH RUBBER GASKET, SEE PLAN VIEW FOR DETAILS.



**PIPE CROSS SECTION**  
 NOT TO SCALE



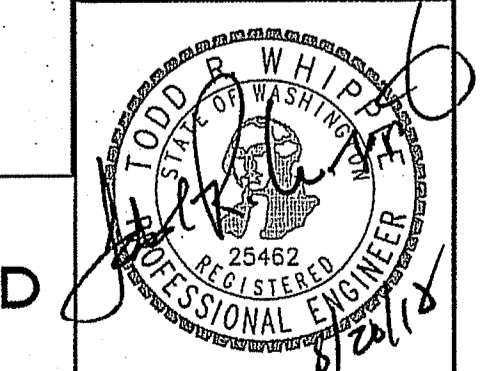
NOTE:  
 1. SDCB #XA REFERS TO MANHOLES ON THE LEFT OF ALIGNMENT. (LEFT)  
 2. SDCB #XB REFERS TO MANHOLES ON THE CENTERLINE OF ALIGNMENT. (RIGHT)

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer: \_\_\_\_\_  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



**PLANS  
 NOT APPROVED  
 BY AGENCY**

DATUM: NAVD - 88  
 TEM S-6 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.67 (NAVD29) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1"=50'  
 VERTICAL:  
 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

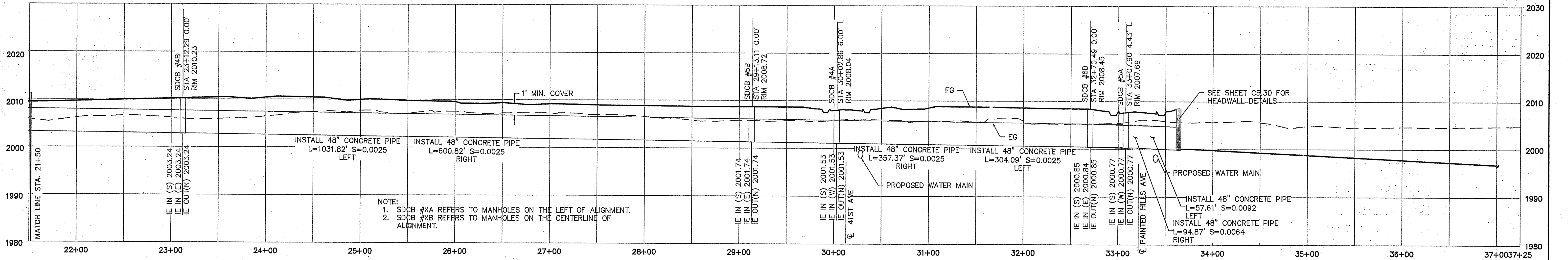
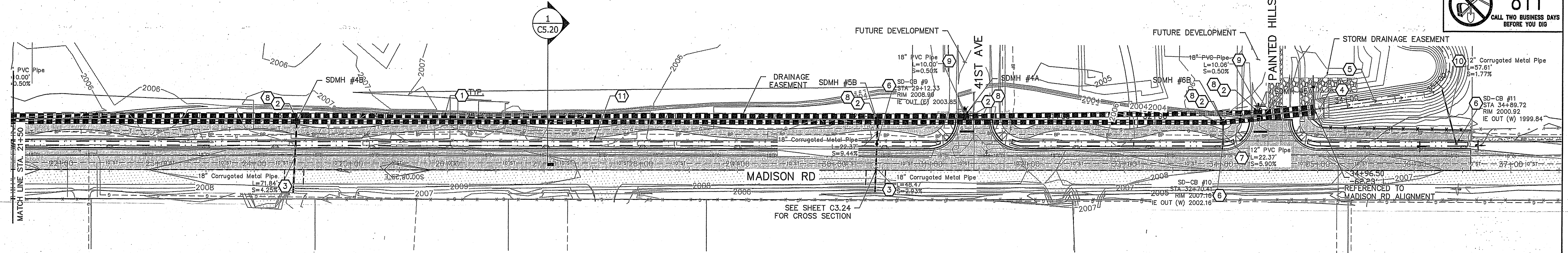


**SPOKANE VALLEY PAINTED HILLS PRD  
 MADISON ROAD P&P  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

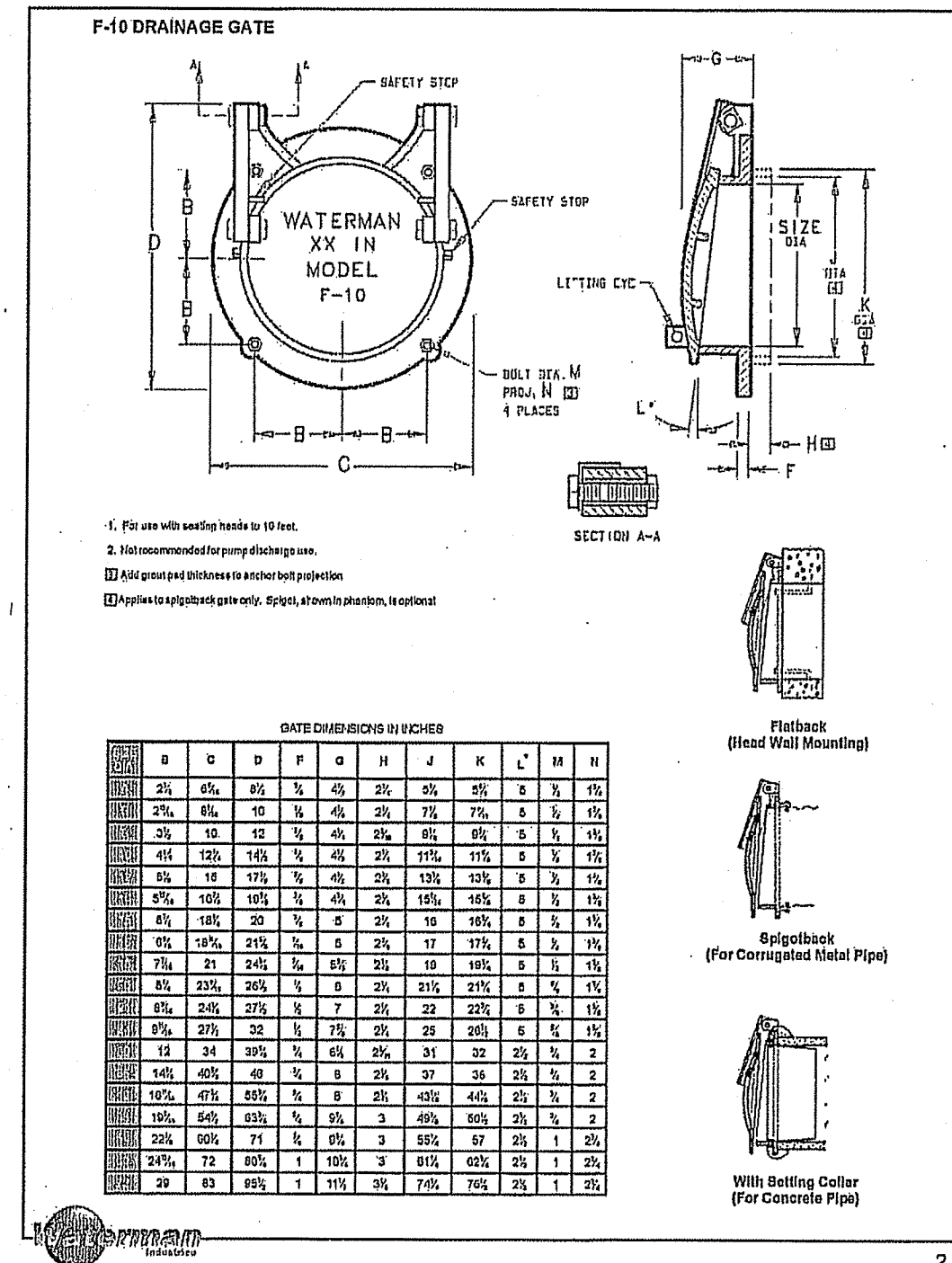
**SHEET  
 C5.20**  
 JOB NUMBER  
 13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

UNDERGROUND SERVICE ALERT  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG



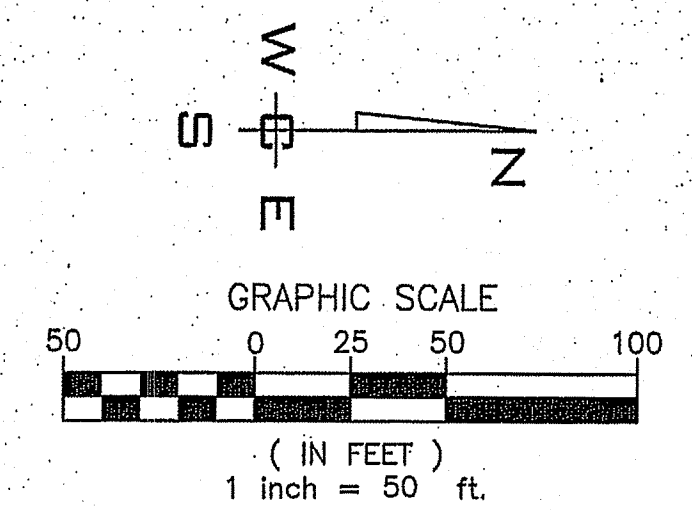
NOTE:  
 1. SDCB #XA REFERS TO MANHOLES ON THE LEFT OF ALIGNMENT.  
 2. SDCB #XB REFERS TO MANHOLES ON THE CENTERLINE OF ALIGNMENT.



| Gate Size | A   | B      | C   | D   | E   | F   | G   | H   | J   | K   | L   | M   | N   |
|-----------|-----|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 18"       | 24  | 47 1/2 | 48  | 3/4 | 26  | 26  | 26  | 26  | 26  | 26  | 26  | 26  | 26  |
| 24"       | 28  | 48     | 3/4 | 36  | 36  | 36  | 36  | 36  | 36  | 36  | 36  | 36  | 36  |
| 30"       | 32  | 48     | 3/4 | 46  | 46  | 46  | 46  | 46  | 46  | 46  | 46  | 46  | 46  |
| 36"       | 36  | 48     | 3/4 | 56  | 56  | 56  | 56  | 56  | 56  | 56  | 56  | 56  | 56  |
| 42"       | 40  | 48     | 3/4 | 66  | 66  | 66  | 66  | 66  | 66  | 66  | 66  | 66  | 66  |
| 48"       | 44  | 48     | 3/4 | 76  | 76  | 76  | 76  | 76  | 76  | 76  | 76  | 76  | 76  |
| 54"       | 48  | 48     | 3/4 | 86  | 86  | 86  | 86  | 86  | 86  | 86  | 86  | 86  | 86  |
| 60"       | 52  | 48     | 3/4 | 96  | 96  | 96  | 96  | 96  | 96  | 96  | 96  | 96  | 96  |
| 66"       | 56  | 48     | 3/4 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| 72"       | 60  | 48     | 3/4 | 116 | 116 | 116 | 116 | 116 | 116 | 116 | 116 | 116 | 116 |
| 78"       | 64  | 48     | 3/4 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 |
| 84"       | 68  | 48     | 3/4 | 136 | 136 | 136 | 136 | 136 | 136 | 136 | 136 | 136 | 136 |
| 90"       | 72  | 48     | 3/4 | 146 | 146 | 146 | 146 | 146 | 146 | 146 | 146 | 146 | 146 |
| 96"       | 76  | 48     | 3/4 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 | 156 |
| 102"      | 80  | 48     | 3/4 | 166 | 166 | 166 | 166 | 166 | 166 | 166 | 166 | 166 | 166 |
| 108"      | 84  | 48     | 3/4 | 176 | 176 | 176 | 176 | 176 | 176 | 176 | 176 | 176 | 176 |
| 114"      | 88  | 48     | 3/4 | 186 | 186 | 186 | 186 | 186 | 186 | 186 | 186 | 186 | 186 |
| 120"      | 92  | 48     | 3/4 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 | 196 |
| 126"      | 96  | 48     | 3/4 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 |
| 132"      | 100 | 48     | 3/4 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 |
| 138"      | 104 | 48     | 3/4 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 |
| 144"      | 108 | 48     | 3/4 | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 236 |
| 150"      | 112 | 48     | 3/4 | 246 | 246 | 246 | 246 | 246 | 246 | 246 | 246 | 246 | 246 |
| 156"      | 116 | 48     | 3/4 | 256 | 256 | 256 | 256 | 256 | 256 | 256 | 256 | 256 | 256 |

**CONSTRUCTION NOTES**

1. PROVIDE AND INSTALL CLASS III 48" RCP PIPE PER WSDOT STANDARD SECTION 9-05. SEE TYPICAL CROSS SECTION ON SHEET C5.20.
2. PROVIDE AND INSTALL TYPE 2-60" SD CATCH BASIN WITH 2 FT. SUMP WITH FLAT LID LABELED "STORM" PER WSDOT STANDARD PLAN B-10.20-01.
3. PROVIDE AND INSTALL 18" CMP CULVERT WITH RUBBER GASKET, SEE SHEET C5.22 FOR DETAILS.
4. PROVIDE AND INSTALL CONCRETE HEADWALL AND OUTLET PAD, SEE SHEET C5.3 FOR DETAILS.
5. PROVIDE AND INSTALL BIOSWALE, SEE SHEET C5.3 FOR DETAILS.
6. PROVIDE AND INSTALL TYPE 1 CATCH BASIN WITH TYPE 1 FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112 AND S-121. SEE PLANS FOR DETAILS.
7. PROVIDE AND INSTALL 12" SDR-35 PVC PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE PLANS FOR DETAILS.
8. PROVIDE AND INSTALL 18" WATERMAN F-10 FLAP GATE OR APPROVED EQUAL ON END OF 18" CULVERT DISCHARGING INTO MANHOLE. SEE SPECIFICATION PAGE, THIS SHEET.
9. PROVIDE AND INSTALL 18" SDR-35 PVC PIPE WITH END CAP PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE PLANS FOR DETAILS.
10. PROVIDE AND INSTALL 12" CMP PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE PLAN VIEW FOR DETAILS.
11. PROVIDE AND INSTALL DRAINAGE SWALE PER SHEET C0.3.

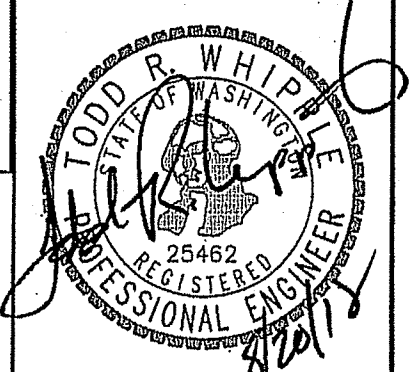


City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewed:  
 New Street Mile - Public:

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted  
 Acceptance Comments



PLANS  
 NOT APPROVED  
 BY AGENCY

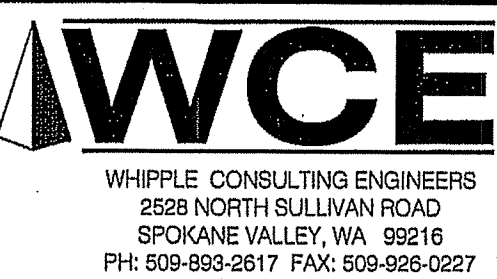
DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

SCALE:  
 HORIZONTAL:  
 1"=50'  
 VERTICAL:  
 1"=10'

PROJ #: 13-1166  
 DATE: 09/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

CIVIL  
 STRUCTURAL  
 SURVEYING  
 TRAFFIC  
 PLANNING  
 LANDSCAPE  
 OTHER

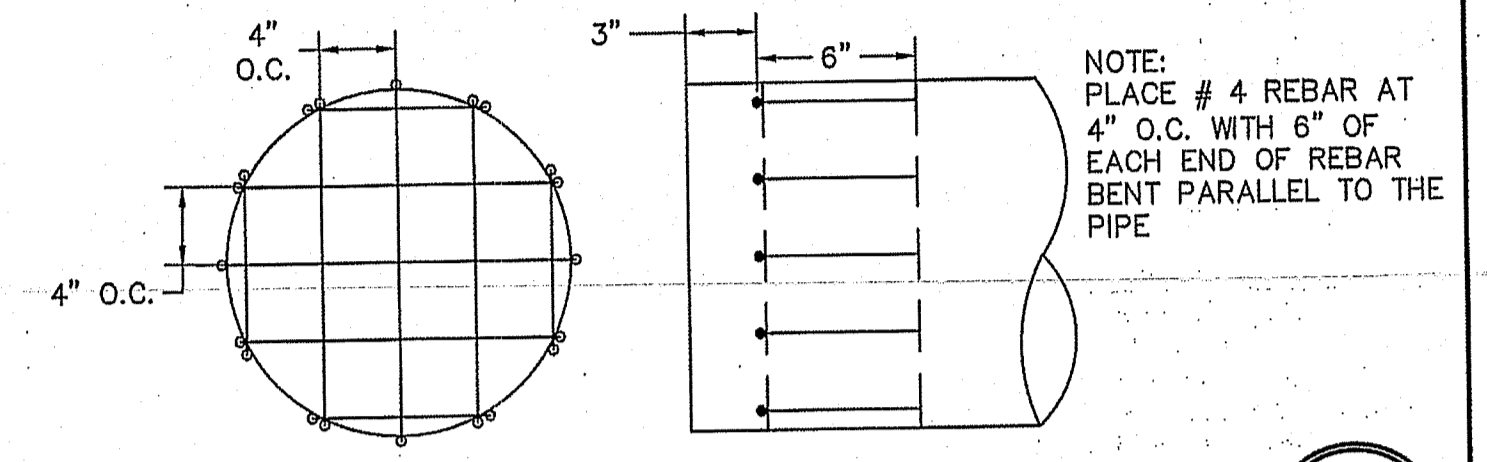
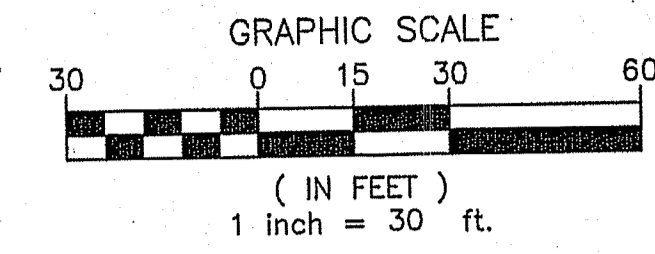
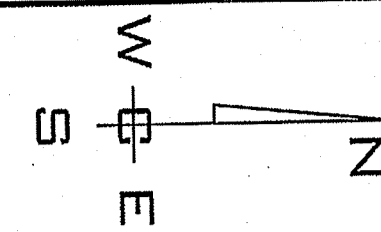


**SPOKANE VALLEY PAINTED HILLS PRD  
 MADISON ROAD P&P CONT.  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

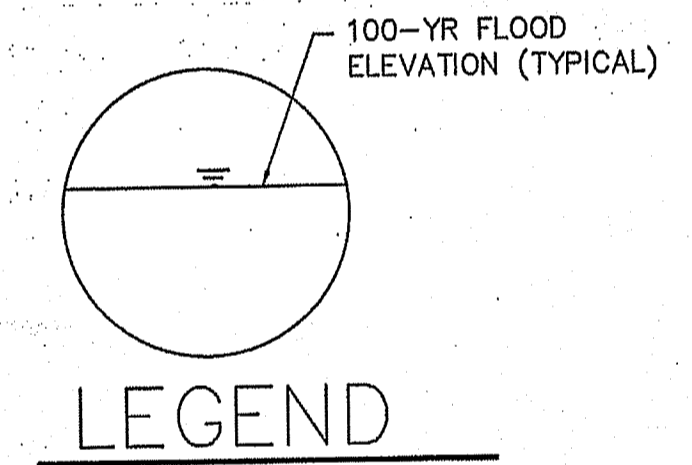
SHEET  
**C5.21**  
 JOB NUMBER  
**13-1166**

SE<sub>1</sub>, SEC. 33, T. 25N., R. 44E., W.M.  
 SW<sub>2</sub>, SEC. 34, T. 25N., R. 44E., W.M.  
 NE<sub>2</sub>, SEC. 4, T. 24N., R. 44E., W.M.

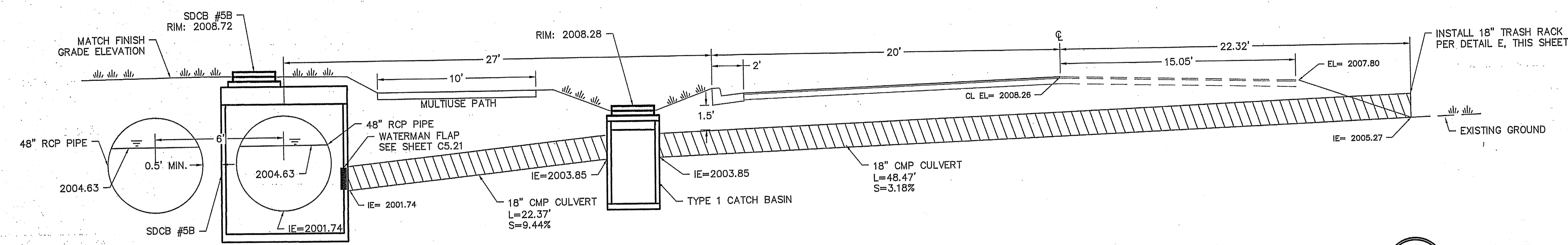
**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



**18" TRASH RACK DETAIL E**  
 NOT TO SCALE

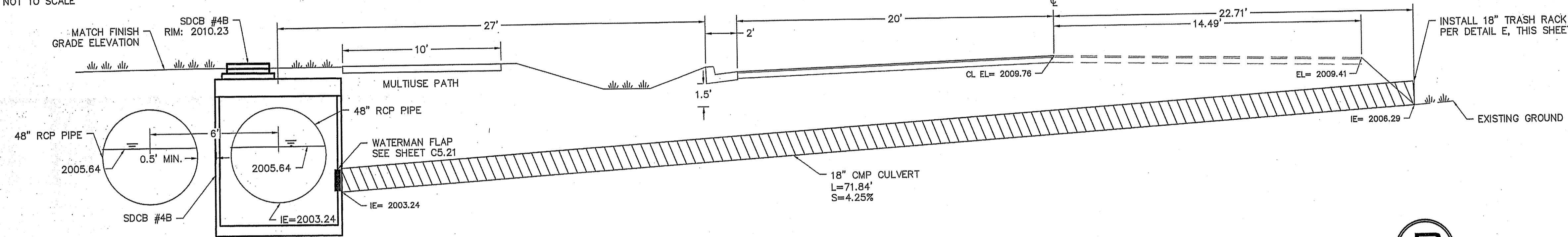


**LEGEND**



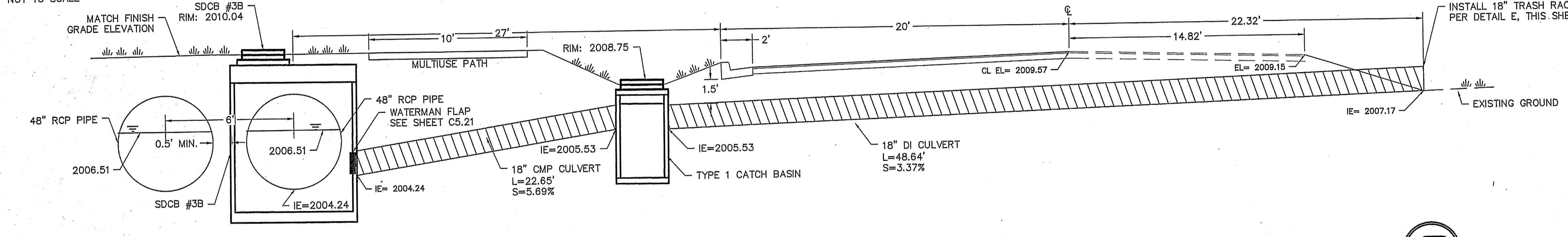
**MADISON RD PIPE CROSSING - MH #5B** (SEE SHEET C3.23)

MADISON STA 30+43  
 NOT TO SCALE



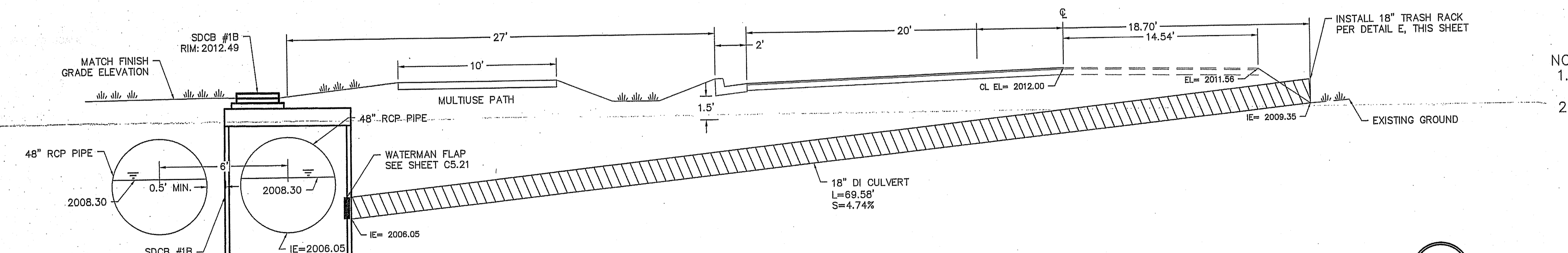
**MADISON RD PIPE CROSSING - MH #4B** (SEE SHEET C3.22)

MADISON STA 24+43  
 NOT TO SCALE



**MADISON RD PIPE CROSSING - MH #3B** (SEE SHEET C3.21)

MADISON STA 20+44  
 NOT TO SCALE



**MADISON RD PIPE CROSSING - MH #1B** (SEE SHEET C3.20)

MADISON STA 13+22  
 NOT TO SCALE

- NOTE:
1. CMP SHALL MEET THE REQUIREMENTS OF WSDOT STD SPEC 9-05.1(2)
  2. DI PIPE SHALL MEET THE REQUIREMENTS OF WSDOT STD SPEC 9-05.13

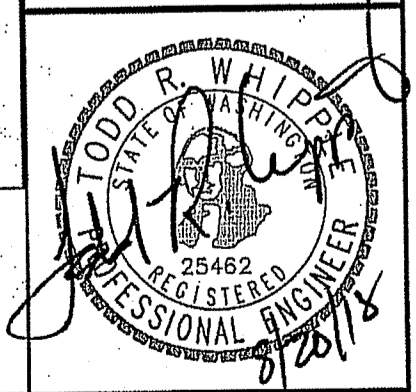
**PLANS NOT APPROVED BY AGENCY**

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public:

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted  
 Acceptance Comments



DATUM: NAVD - 88  
 TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2008.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1"=30'  
 VERTICAL:  
 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

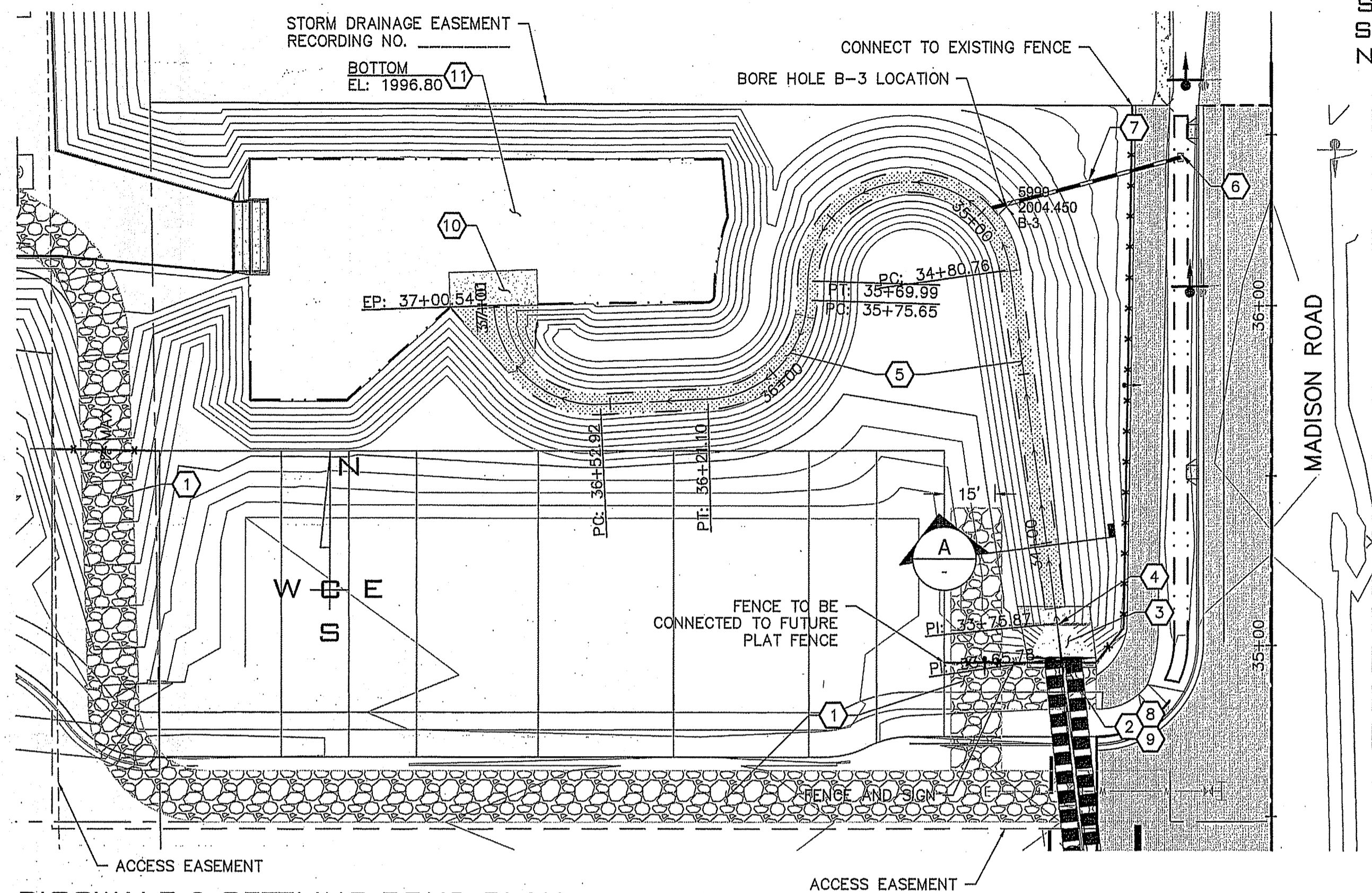
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|-------------------------------------|------------|
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| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |

**IWCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2628 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2817 FAX: 509-826-0227

**SPOKANE VALLEY PAINTED HILLS PRD**  
**MADISON RD CULVERT PLAN**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

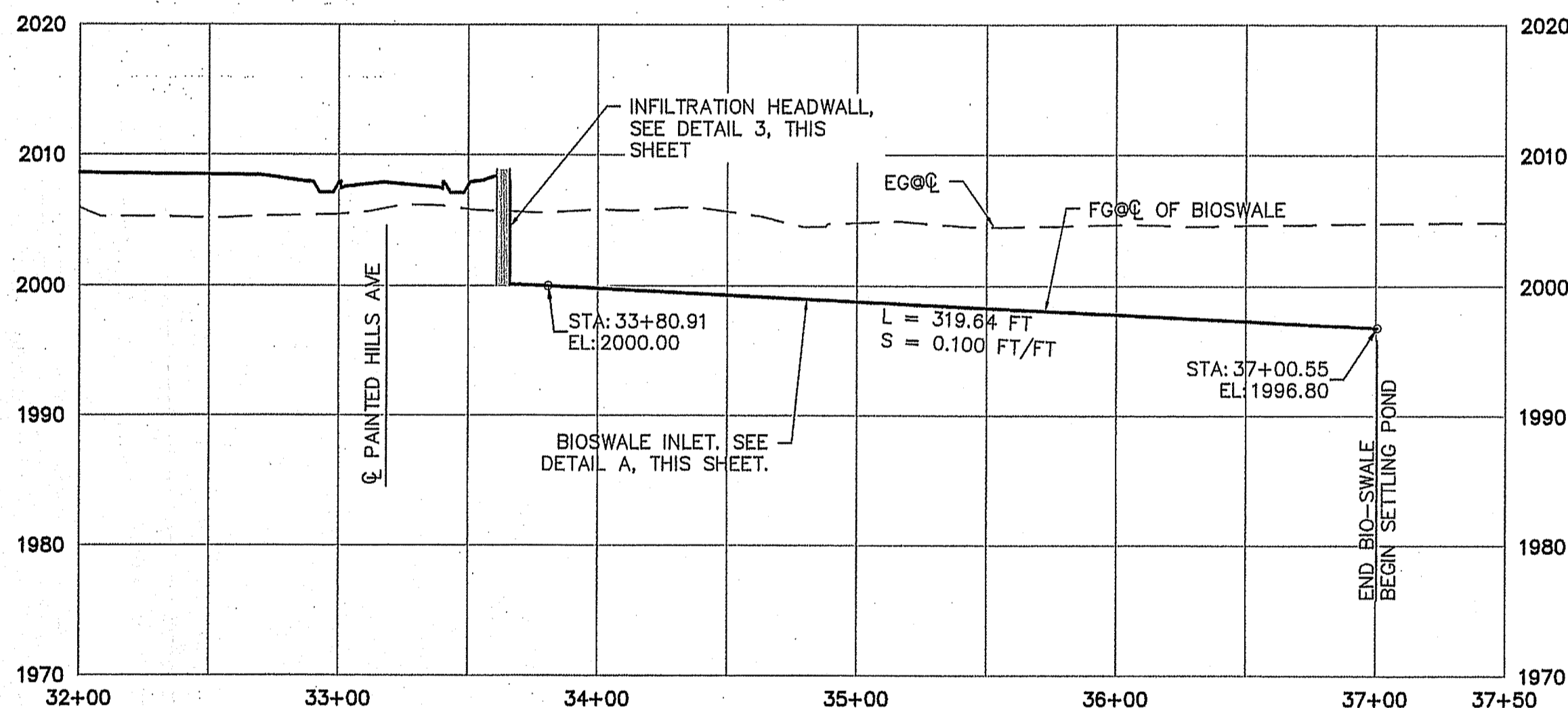
**SHEET**  
**C5.22**  
 JOB NUMBER  
**13-1166**

SE<sub>1/4</sub>, SEC.33, T.25N., R.44E., W.M.  
 SW<sub>1/4</sub>, SEC.34, T.25N., R.44E., W.M.  
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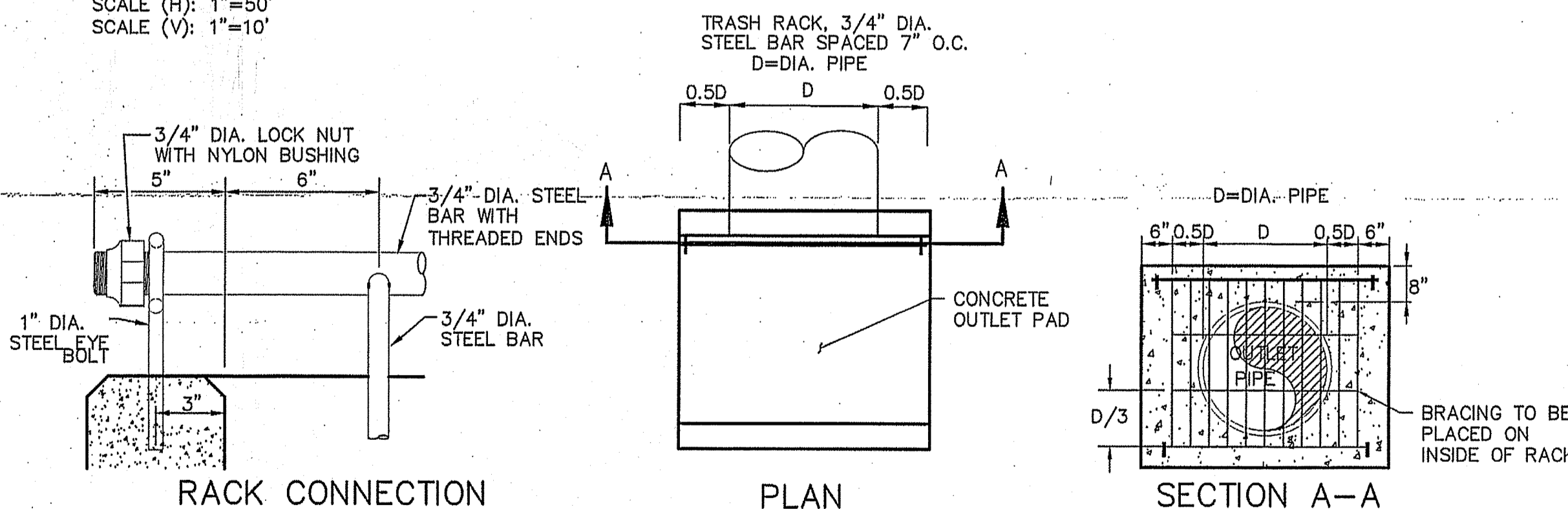
**BIOSWALE & SETTLING POND PLAN**

SCALE: 1"=30'



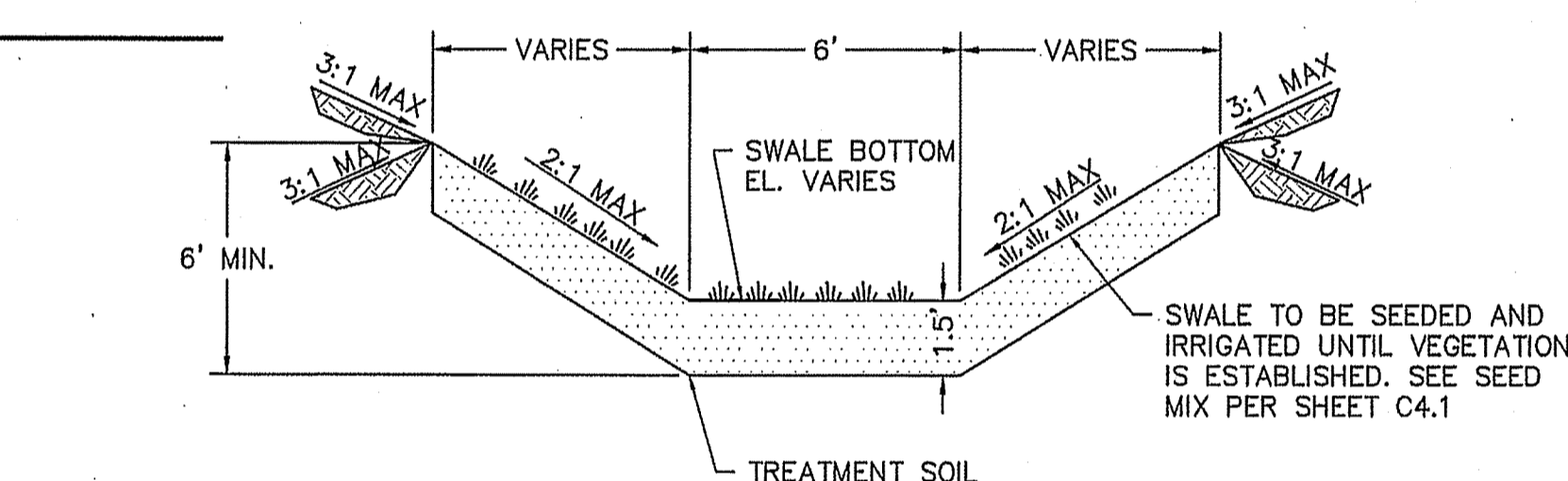
**BIOSWALE PROFILE**

SCALE (H): 1"=50'  
 SCALE (V): 1"=10'



**VERTICAL OUTLET TRASH RACK**  
 NOT TO SCALE

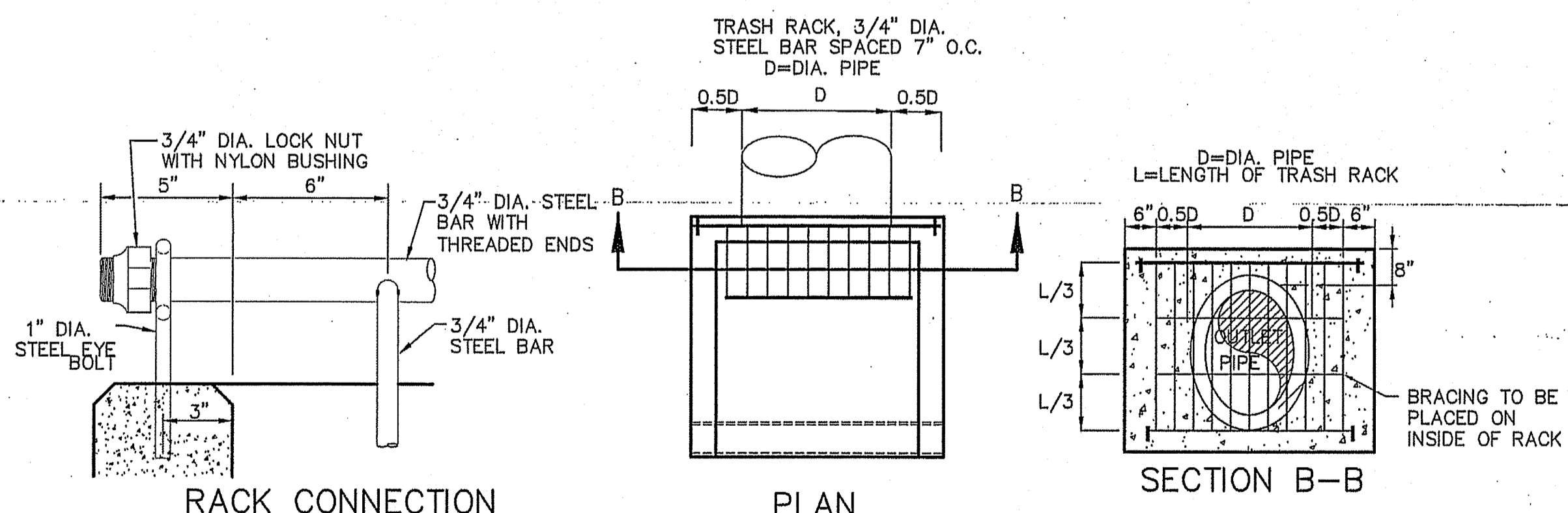
5



**TYPICAL BIOSWALE SECTION A**  
 NOT TO SCALE

SWALE TO BE SEEDED AND IRRIGATED UNTIL VEGETATION IS ESTABLISHED. SEE SEED MIX PER SHEET C4.1

**SLANTED INLET TRASH RACK**  
 NOT TO SCALE

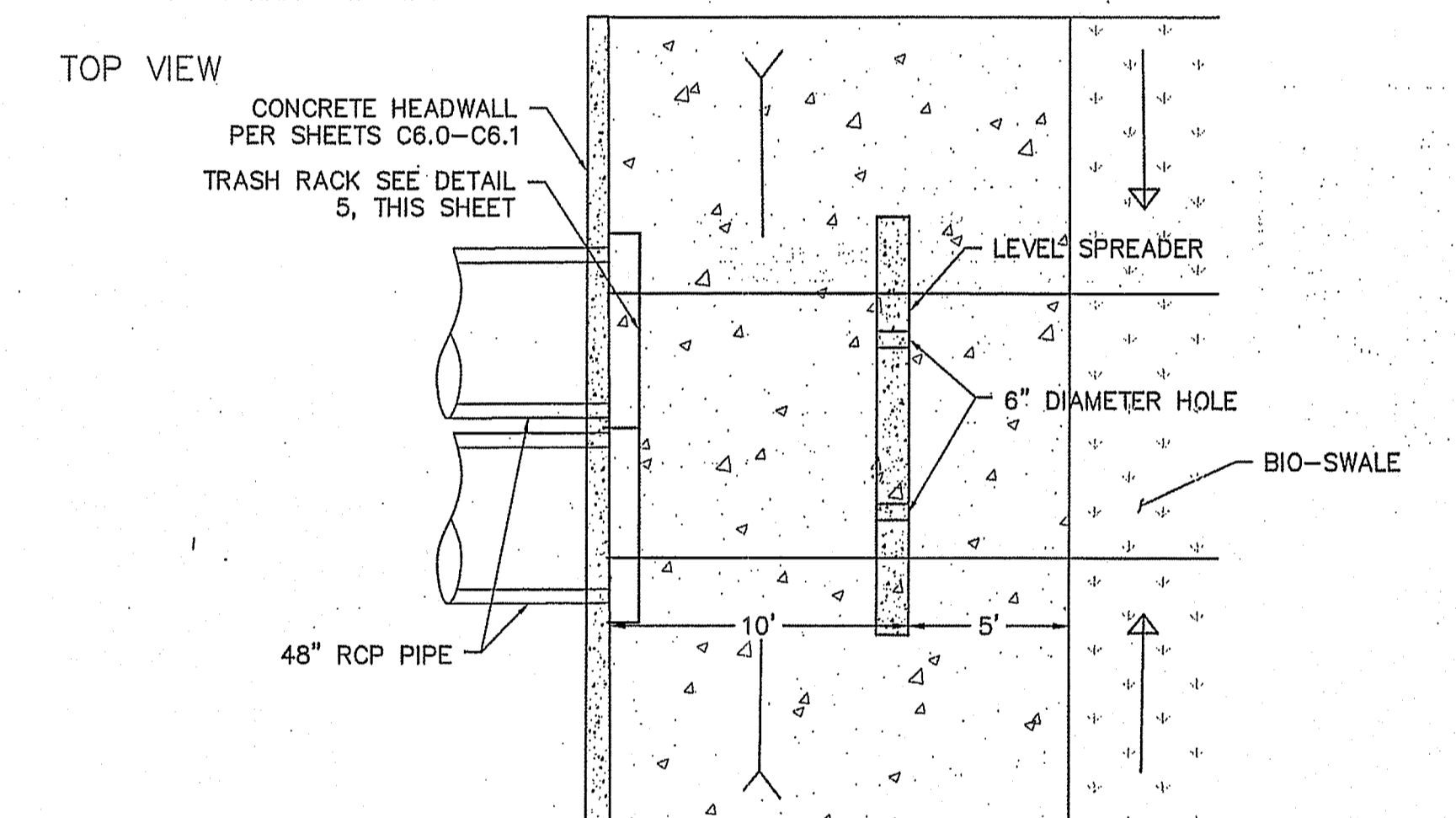
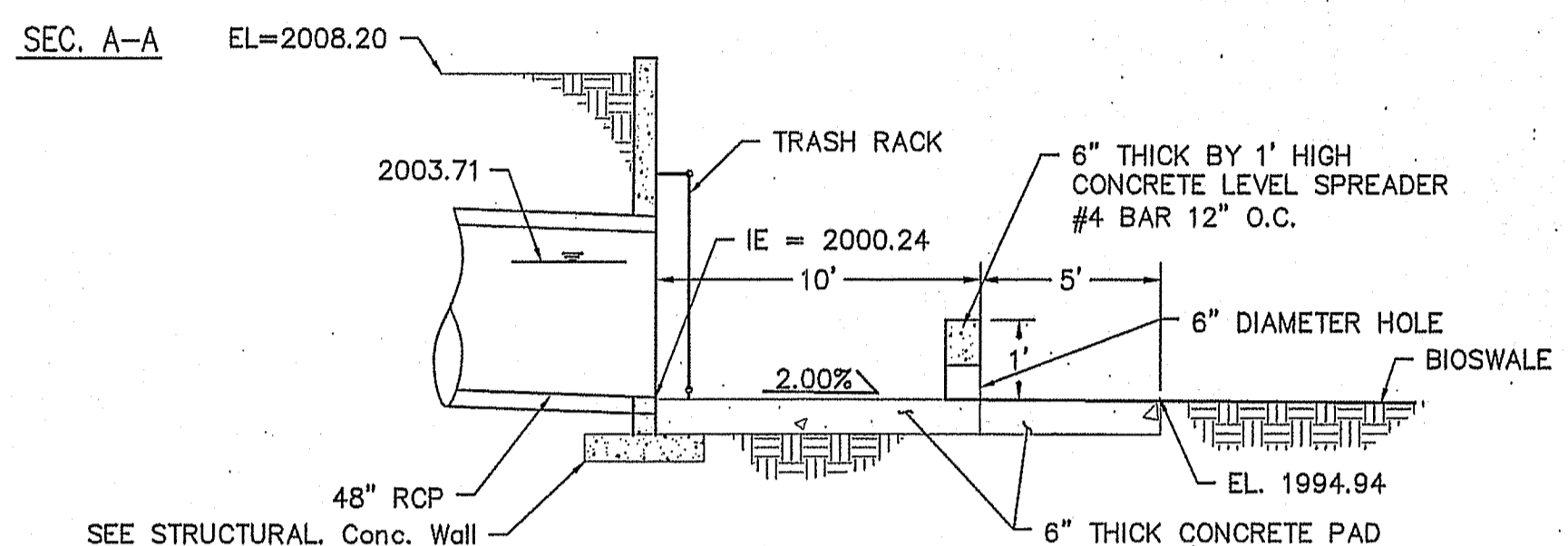
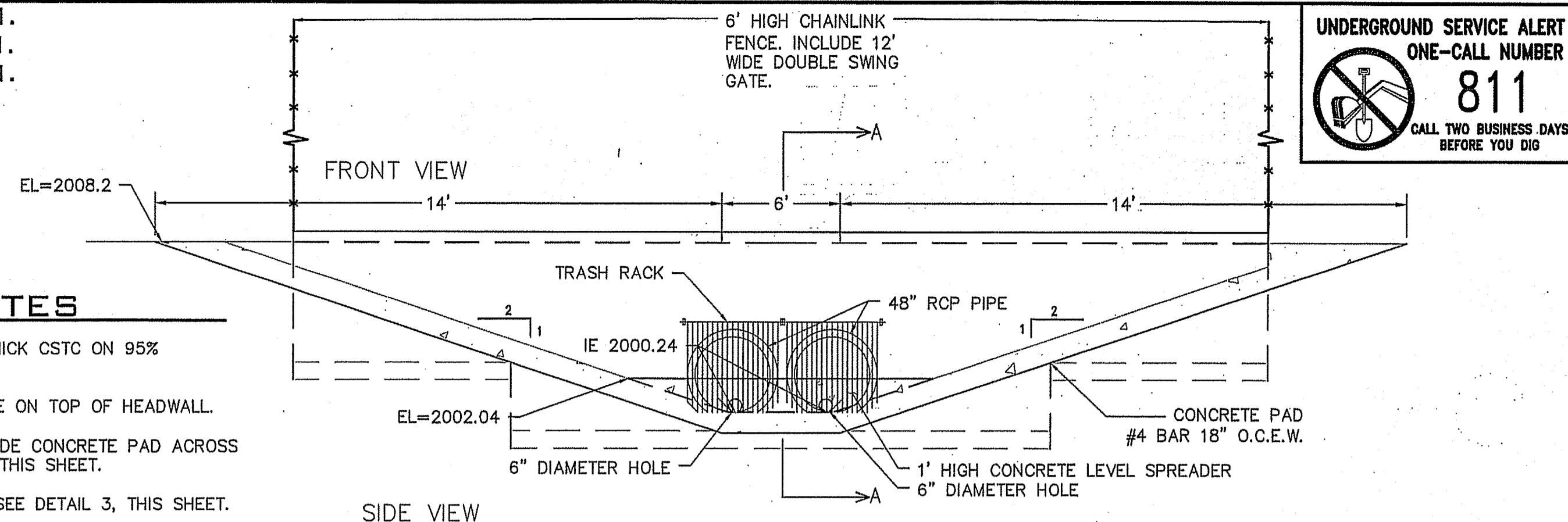


**SLANTED INLET TRASH RACK**  
 NOT TO SCALE

4

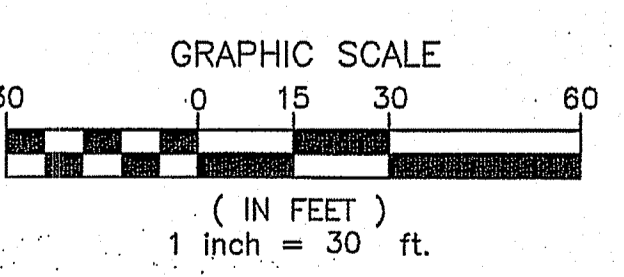
**CONSTRUCTION NOTES**

- 1 CONSTRUCT 15' WIDE ACCESS RD - 6" THICK CSTC ON 95% COMPACTED SUBGRADE.
- 2 PROVIDE AND INSTALL 6' CHAINLINK FENCE ON TOP OF HEADWALL.
- 3 PROVIDE AND INSTALL 6" THICK BY 10' WIDE CONCRETE PAD ACROSS FULL WIDTH OF BIOSWALE. SEE DETAIL 3, THIS SHEET.
- 4 PROVIDE & INSTALL 1' LEVEL SPREADER, SEE DETAIL 3, THIS SHEET.
- 5 PROVIDE AND INSTALL 6' BIOSWALE, SEE SECTION A THIS SHEET.
- 6 PROVIDE AND INSTALL TYPE I CATCH BASIN WITH TYPE I FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112 AND S-121. SEE PLAN FOR DETAILS. SEE SHEET C5.21 FOR RIM AND INVERT.
- 7 PROVIDE AND INSTALL 12" CMP PIPE PER CITY SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE SHEET C5.21 FOR LENGTH AND SLOPE.
- 8 PROVIDE AND INSTALL CONCRETE HEADWALL. SEE DETAIL 3, THIS SHEET.
- 9 PROVIDE AND INSTALL FLOOD FACILITY SIGN CONNECTED TO FENCE. SEE DETAIL A.3 ON SHEET C5.1.
- 10 PROVIDE AND INSTALL 10'x26'x6" CONCRETE PAD ACROSS FULL WIDTH OF BIOSWALE.
- 11 PROVIDE AND INSTALL SETTLING POND PER DETAIL D, SHEET C5.31.



**BIOSWALE INLET CROSS SECTION**  
 NOT TO SCALE

3



DATUM: NAVD - 88  
 TBM 9-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
|     |      |    |           |
|     |      |    |           |

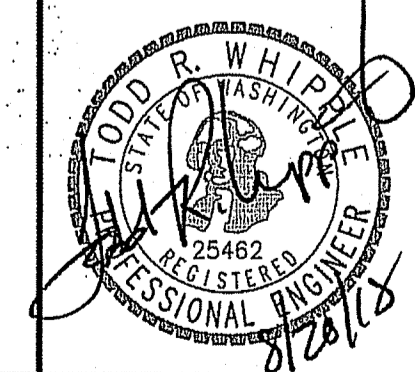
**SCALE:**  
 HORIZONTAL:  
 1"=30'  
 VERTICAL:  
 1"=10'

**PROJ #:** 13-1166  
**DATE:** 11/01/17  
**DRAWN:** JPP  
**REVIEWED:** TRW

CIVIL  
 STRUCTURAL  
 SURVEYING  
 TRAFFIC  
 PLANNING  
 LANDSCAPE  
 OTHER

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2028 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2617 FAX: 509-826-0227

**PAINTED HILLS  
 BIOSWALE/SETTLING POND P&P  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**



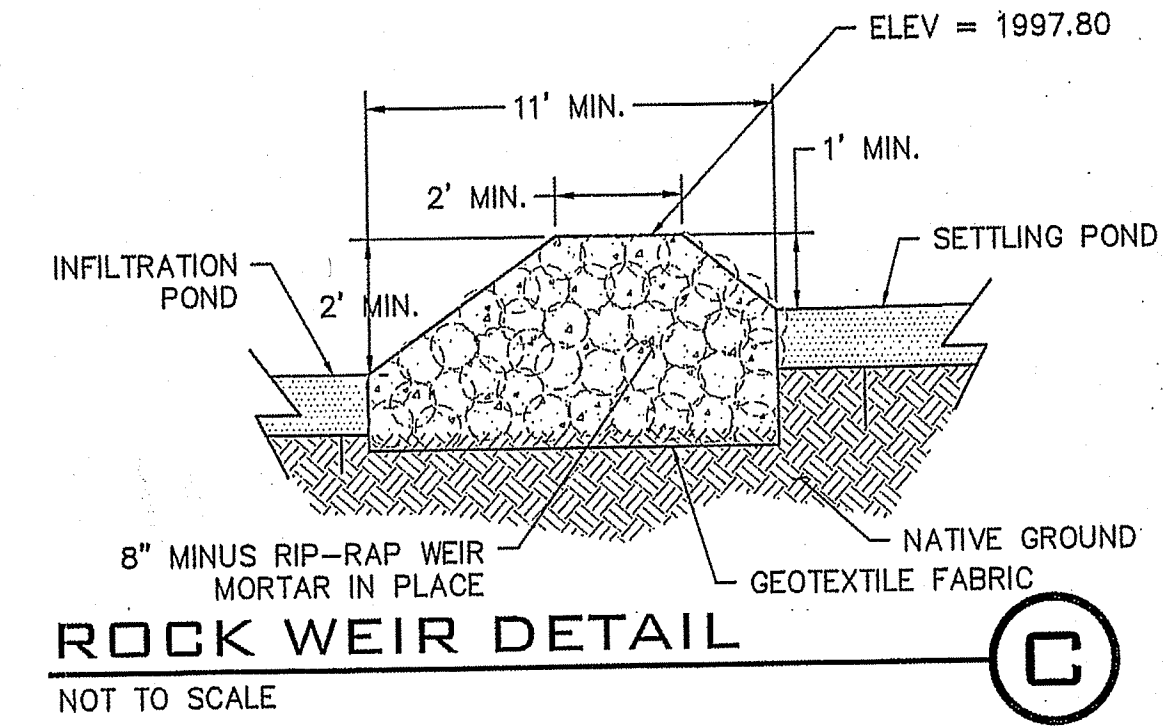
**SHEET  
 C5.30**  
 JOB NUMBER  
 13-1166

SE<sub>1/4</sub>, SEC.33, T.25N., R.44E., W.M.  
 SW<sub>1/4</sub>, SEC.34, T.25N., R.44E., W.M.  
 NE<sub>1/4</sub>, SEC. 4, T.24N., R.44E., W.M.

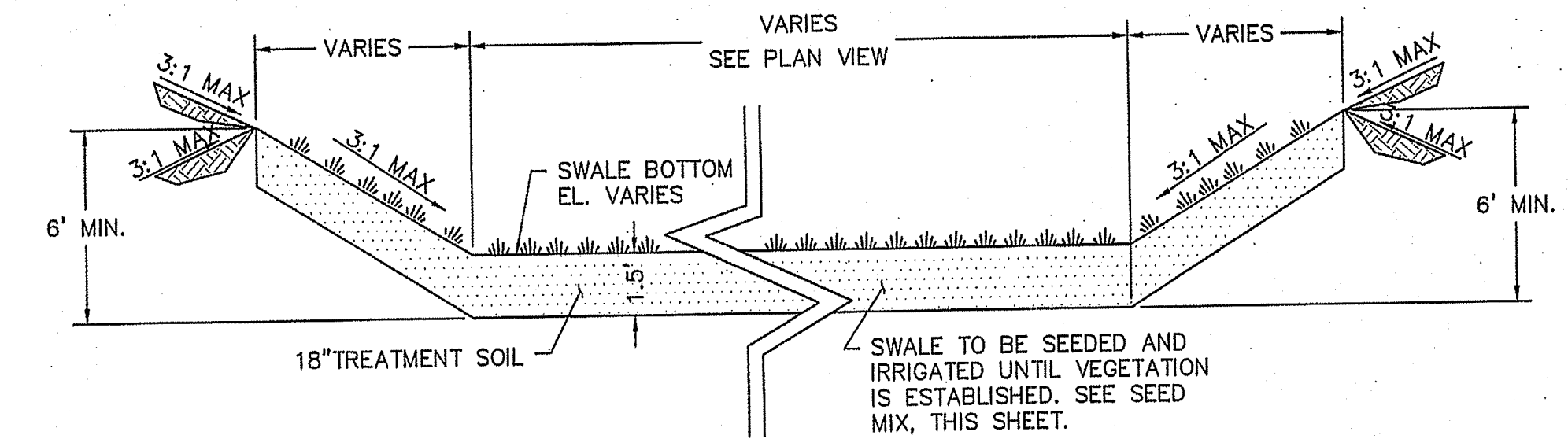
**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG

**CONSTRUCTION NOTES**

- 1 PROVIDE AND INSTALL 12" PERFORATED PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 2 PROVIDE AND INSTALL DRYWELL PER CITY OF SPOKANE VALLEY STANDARD S-101, WITH ADDITIONAL BARREL SECTIONS TO ACHIEVE PLAN DEPTH. RIM ELEVATION PER PLAN. SEE DETAIL B & C, PER SHEET C5.32.
- 3 PROVIDE AND INSTALL NONWOVEN GEOTEXTILE FABRIC, MODERATE SURVIVABILITY PER WSDOT STD SPEC 9-33.2(1). OVERLAP FABRIC A MINIMUM OF 1'-6". SEE DETAIL B SHEET C5.32 FOR PLACEMENT.
- 4 PROVIDE AND INSTALL DRYWELL ROCK PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE DETAIL B & C, SHEET C5.32 FOR PLACEMENT AND DEPTH.
- 5 PROVIDE AND INSTALL 20' WIDE ROCK WEIR PER DETAIL C, THIS SHEET.
- 6 PROVIDE AND INSTALL POND PER DETAIL D, THIS SHEET.
- 7 PROVIDE AND INSTALL MAINTENANCE ACCESS ROAD.



**ROCK WEIR DETAIL C**  
 NOT TO SCALE



NOTE:  
 SEE SHEET C5.32 FOR DRYWELL AND GRAVEL GALLERY PLACEMENT

**TYPICAL POND SECTION D**  
 NOT TO SCALE

**INFILTRATION POND**  
 FINISHED GRADE POND BOTTOM EL=1995.80  
 POND TREATMENT AREA PROVIDED=61,004 S.F.  
 MINIMUM BERM ELEV.=2002.80  
 DRYWELL ROCK BOTTOM AREA=75,868 S.F.

**SETTLING POND**  
 FINISHED GRADE POND BOTTOM EL=1996.80  
 POND TREATMENT AREA PROVIDED=7,172 S.F.  
 MINIMUM BERM ELEV.=2002.80

**SEEDING NOTE:**

GRASS SEED: PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE OF PURITY AND GERMINATION ESTABLISHED BY THE OFFICIAL SEED ANALYSIS OF NORTH AMERICAN. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

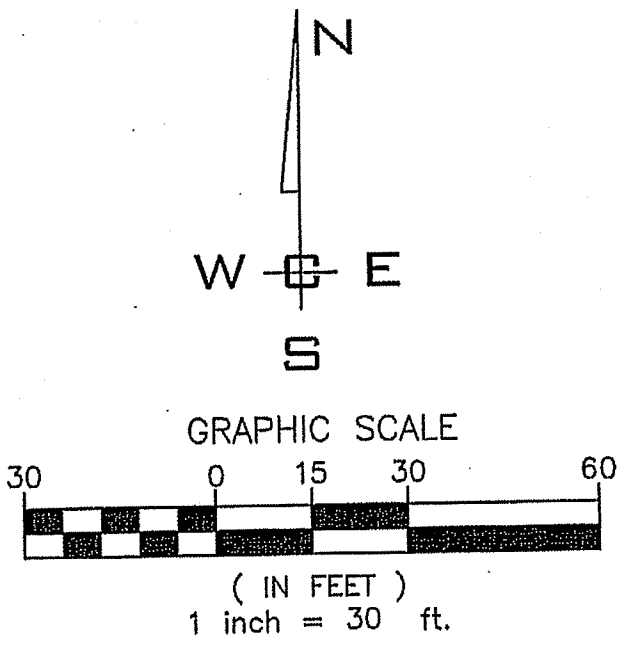
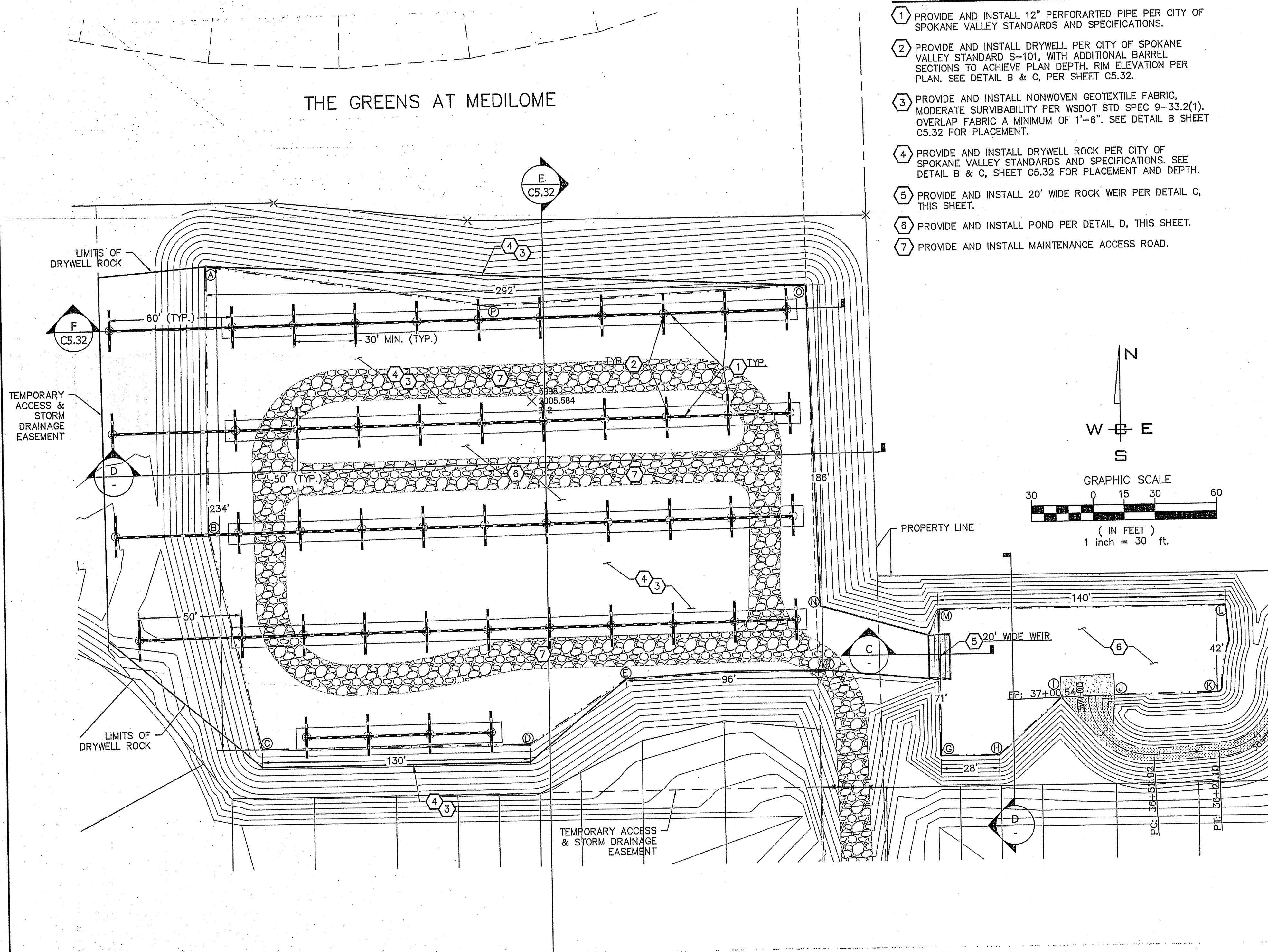
- 10 PER CENT ELKA PERENNIAL RYE
- 25 PERCENT DURAR HARD FESCUE
- 50 PERCENT COVAR SHEEP/FESCUE
- 15 PERCENT REUBENS CANADIAN BLUEGRASS

PROVIDE MIXTURE COMPOSED OF GRASS SEED AND FERTILIZER IN PERCENTAGES AS FOLLOWS:

- GRASS SEED: 90 LBS. PER ACRE
- FERTILIZER: 16-16-16 TIMED RELEASE COMPOSITION, 300 LBS. PER ACRE

ALL SEEDING OF SLOPES SHALL BE DONE IN ACCORDANCE WITH THE W.S.D.O.T. STANDARD SPECIFICATIONS, SECTION 8-01.

| INFILTRATION POND REFERENCE |            |          |        |       |
|-----------------------------|------------|----------|--------|-------|
| CORNER                      | ALIGNMENT  | STATION  | OFFSET | RT/LT |
| A                           | MADISON RD | 38+13.73 | 655.43 | LT    |
| B                           | MADISON RD | 36+87.52 | 656.31 | LT    |
| C                           | MADISON RD | 35+81.36 | 631.84 | LT    |
| D                           | MADISON RD | 35+81.72 | 501.54 | LT    |
| E                           | MADISON RD | 36+12.74 | 453.89 | LT    |
| F                           | MADISON RD | 36+14.98 | 357.25 | LT    |
| G                           | MADISON RD | 35+72.67 | 301.66 | LT    |
| H                           | MADISON RD | 35+72.65 | 273.17 | LT    |
| I                           | MADISON RD | 35+99.88 | 242.61 | LT    |
| J                           | MADISON RD | 36+00.71 | 216.63 | LT    |
| K                           | MADISON RD | 36+02.02 | 165.00 | LT    |
| L                           | MADISON RD | 36+43.18 | 162.20 | LT    |
| M                           | MADISON RD | 36+43.52 | 301.89 | LT    |
| N                           | MADISON RD | 36+46.05 | 359.18 | LT    |
| O                           | MADISON RD | 38+01.37 | 363.76 | LT    |
| P                           | MADISON RD | 37+94.00 | 518.60 | LT    |

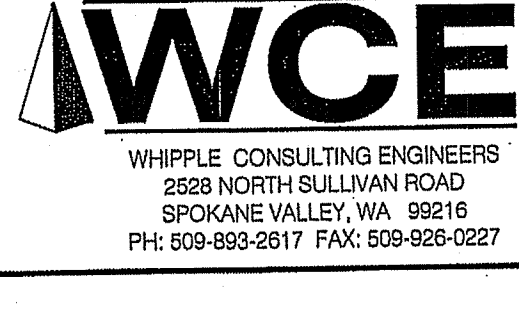


DATUM: NAVD - 88  
 TBM S-S OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.87  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

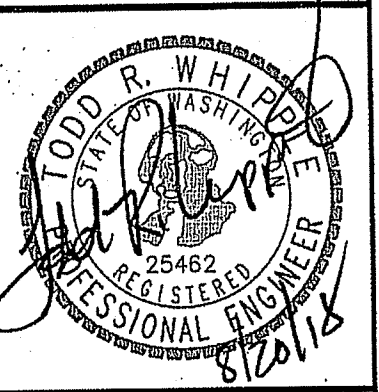
| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
|     |      |    |           |

**SCALE:**  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=10'

PROJ #: 13-1166  
 DATE: 11/01/17  
 DRAWN: JPP  
 REVIEWED: TRW



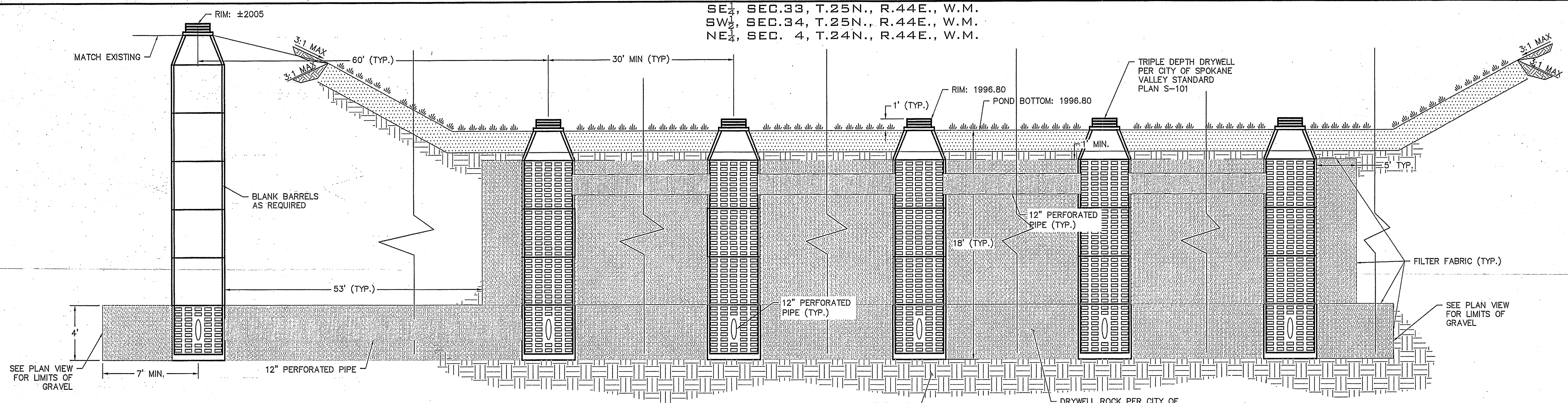
**PAINTED HILLS**  
**INFILTRATION POND PLAN**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**



**SHEET**  
**C5.31**  
 JOB NUMBER  
**13-1166**

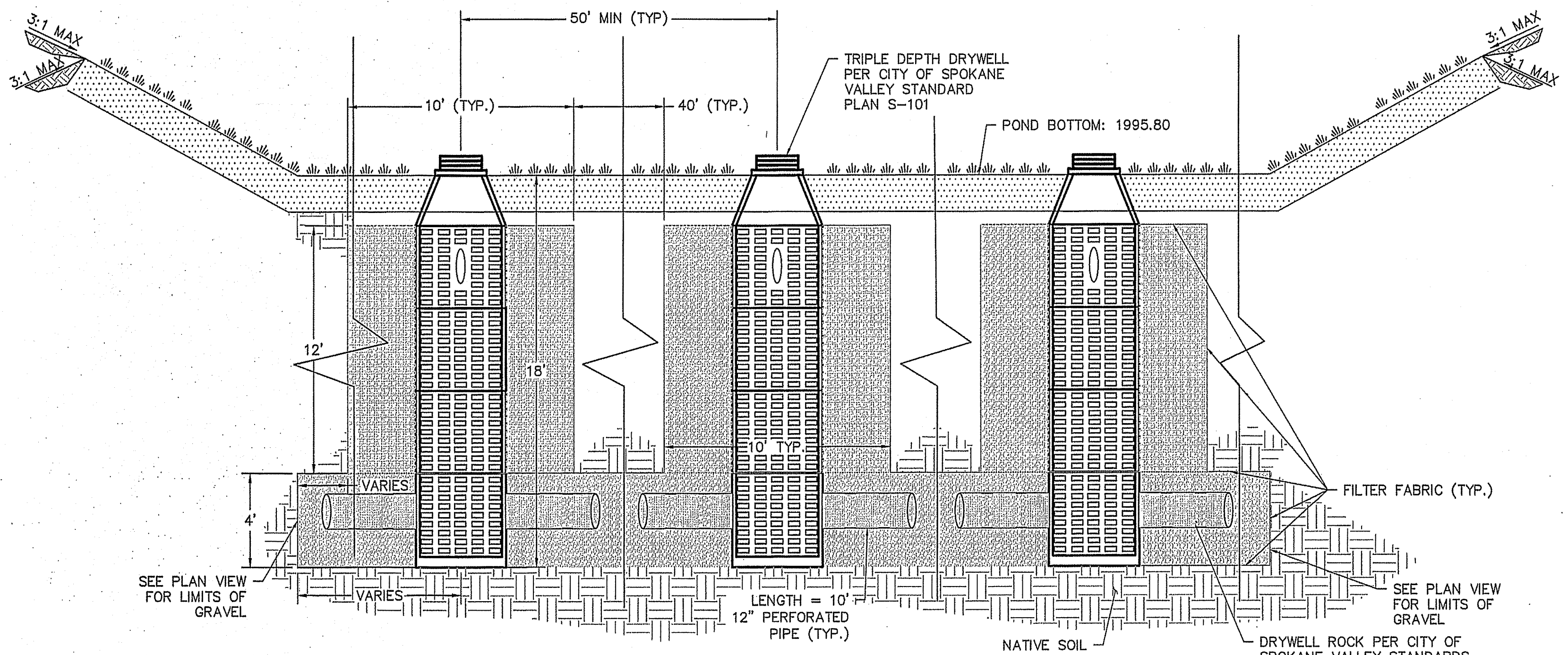
SE $\frac{1}{4}$ , SEC.33, T.25N., R.44E., W.M.  
 SW $\frac{1}{4}$ , SEC.34, T.25N., R.44E., W.M.  
 NE $\frac{1}{4}$ , SEC. 4, T.24N., R.44E., W.M.

UNDERGROUND SERVICE ALERT  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG



**TYPICAL DRAIN FIELD CROSS SECTION (EAST-WEST)**  
 NOT TO SCALE

(F)



**TYPICAL DRAIN FIELD CROSS SECTION (NORTH-SOUTH)**  
 NOT TO SCALE

(E)

DATUM: NAVD - 88  
 TBM S-S OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE | BY | REVISIONS |
|-----|------|----|-----------|
|     |      |    |           |
|     |      |    |           |
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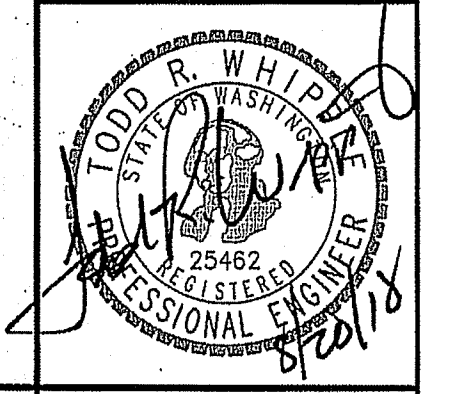
**SCALE:**  
 HORIZONTAL: N/A  
 VERTICAL: N/A

**PROJ #:** 13-1166  
**DATE:** 11/01/17  
**DRAWN:** JPP  
**REVIEWED:** TRW

- CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- OTHER

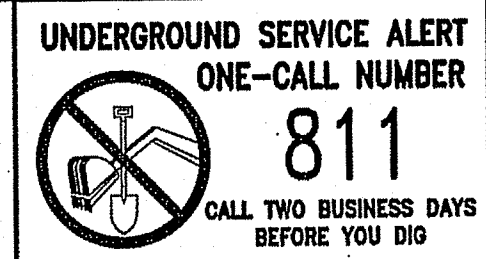
**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2628 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2517 FAX: 509-826-0227

**PAINTED HILLS  
 INFILTRATION POND DETAILS  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**



**SHEET  
 C5.32**  
 JOB NUMBER  
**13-1166**

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**BASIS OF DESIGN**

GOVERNING CODE: INTERNATIONAL BUILDING CODE, 2015 EDITION

CHANNEL WALL DESIGN VALUES:

DESIGN SOIL VALUES:  
 BEARING PRESSURE 1500 PSF  
 COEFFICIENT OF FRICTION 0.35  
 INTERNAL FRICTION ANGLE 34° (WITH SELECT BACKFILL)  
 \*\*PER THE GEOTECHNICAL ENGINEER OF RECORD. FIELD VERIFY.

GEOTECHNICAL INSPECTION:  
 THE GEOTECHNICAL ENGINEER SHALL INSPECT ALL PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF CONCRETE AND REINFORCING STEEL AND PROVIDE A LETTER TO THE OWNER STATING THE SOILS ARE ADEQUATE TO SUPPORT THE DESIGN SOIL VALUES. CONTRACTOR TO FOLLOW THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR STEEP SLOPE BEST MANAGEMENT PRACTICES WHERE APPLICABLE.

**CAST-IN-PLACE CONCRETE**

ALL CONCRETE SHALL BE STONE AGGREGATE CONCRETE HAVING A UNIT WEIGHT OF APPROXIMATELY 150 PCF. CONCRETE SUBMITTALS SHALL CONFORM TO IBC SECTION 1905. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN AND TESTING REPORTS FOR REVIEW BY THE ENGINEER PRIOR TO PLACEMENT OF ANY CONCRETE. MIXING AND PLACING OF ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301, ACI 318 AND THE IBC.

**MIX DESIGN REQUIREMENTS**

|                 | SPECIFIED 28-DAY COMPRESSIVE STRENGTH | MAXIMUM AGGREGATE SIZE | MAX. W/C RATIO | AIR CONTENT (%) |
|-----------------|---------------------------------------|------------------------|----------------|-----------------|
| FOUNDATIONS     | 3000 PSI**                            | 1 INCH                 | --             | --              |
| RETAINING WALLS | 3000 PSI**                            | 3/4 INCH               | --             | 5.0             |
| EXTERIOR SOG    | 3000 PSI**                            | 3/4 INCH               | 0.50           | 6.0             |

W/C RATIO: WATER-CEMENTITIOUS MATERIAL RATIOS SHALL BE BASED ON THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS. RATIOS NOT SHOWN IN THE TABLE ABOVE ARE CONTROLLED BY STRENGTH REQUIREMENTS.

CEMENTITIOUS CONTENT: THE USE OF FLY ASH, OTHER POZZOLANS, SILICA FUME, OR SLAG SHALL CONFORM TO ACI STANDARDS. THE AMOUNT OF FLY ASH SHALL BE A MAXIMUM OF 20% OF THE TOTAL CEMENTITIOUS CONTENT UNLESS REVIEWED AND APPROVED OTHERWISE.

AIR CONTENT: CONFORM TO ACI STANDARDS. HORIZONTAL EXTERIOR SURFACES IN CONTACT WITH THE SOIL REQUIRE ENTRAINED AIR IN ACCORDANCE TO ACI TABLE 4.2.2.4 FOR SEVERE EXPOSURE. TOLERANCE IS ±1.5%. AIR CONTENT SHALL BE MEASURED AT POINT OF PLACEMENT.

SLUMP: CONFORM TO ACI STANDARDS. SLUMP SHALL BE DETERMINED AT POINT OF PLACEMENT; A MAXIMUM OF 4" UNLESS APPROVED OTHERWISE.

**CONCRETE REINFORCEMENT**

ALL REINFORCEMENT SHALL CONFORM TO ASTM A-615 GRADE 60 AND MADE FROM NEW BILLETS. REINFORCEMENT TO BE WELDED SHALL CONFORM TO ASTM A-706 GRADE 60 AND BE USED ONLY ON THE APPROVAL OF THE ENGINEER OF RECORD. WELDED WIRE FABRIC (WWF) SHALL BE IN ACCORDANCE TO ASTM A-185. WIRE MESH SHALL LAP AT LEAST ONE GRID AT ENDS AND EDGES.

DETAIL REINFORCING STEEL IN ACCORDANCE WITH THE MOST CURRENT EDITION OF "ACI MANUAL OF STANDARD PRACTICE OF DETAILING REINFORCED CONCRETE STRUCTURES."

LAP CONTINUOUS REINFORCEMENT AS INDICATED IN THE STRUCTURAL DETAILS FOR THIS PROJECT. MECHANICAL SPLICES MAY BE USED WHEN APPROVED BY THE ENGINEER OF RECORD.

ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS TO BE SECURELY TIED IN PLACE PRIOR ON THE PLACEMENT OF CONCRETE.

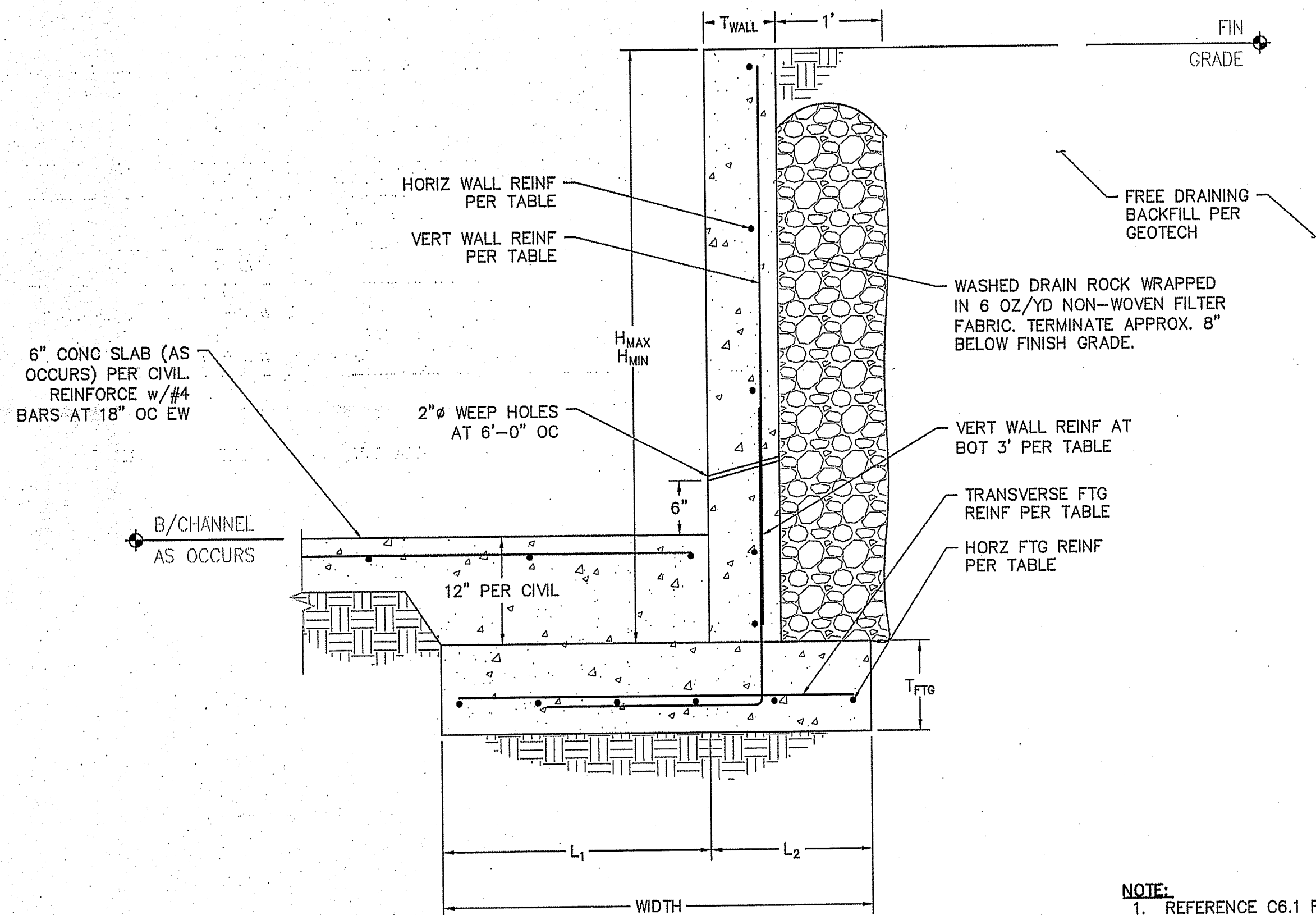
THE FOLLOWING MINIMUM COVER SHALL BE PROVIDED FOR REINFORCEMENT UNLESS NOTED OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH  
 ALL REINFORCEMENT 3" EARTH FACE

CONCRETE EXPOSED TO EARTH OR WEATHER (CAST IN FORMWORK)  
 #3, #4 AND #5 BARS 1-1/2"  
 #6 - #18 BARS 2"

CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND  
 SLABS, WALLS AND JOISTS #11 OR SMALLER 3/4"  
 BEAMS AND COLUMNS 1-1/2"

FIELD BENDING SHALL CONFORM TO THE LATEST EDITION OF ACI 301 "FIELD BENDING OR STRAIGHTENING". BAR SIZES #3 TO #5 MAY BE FIELD BENT COLD ONCE. OTHER SIZES WILL REQUIRE REVIEW OF THE METHOD THROUGH THE ENGINEER OF RECORD. DO NOT TWIST BARS.



**NOTE:**  
 1. REFERENCE C6.1 FOR STRUCTURAL TYPICAL DETAILS.  
 2. ALL STRUCTURES TO BEAR ON SOIL PREPARED PER THE GEOTECHNICAL ENGINEER OF RECORD.

**RETAINING WALL SECTIONS**

| DESCRIPTION                | T <sub>FTG</sub> (IN) | WIDTH (FT) | L <sub>1</sub> (FT) | L <sub>2</sub> (FT) | T <sub>WALL</sub> (IN) | H <sub>MAX</sub> (FT) | H <sub>MIN</sub> (FT) | FOOTING REINFORCEMENT |       | WALL REINFORCEMENT |              | NOTES   |
|----------------------------|-----------------------|------------|---------------------|---------------------|------------------------|-----------------------|-----------------------|-----------------------|-------|--------------------|--------------|---|
|                            |                       |            |                     |                     |                        |                       |                       | TRANSVERSE            | HORZ  | VERT               | HORZ         |   |
| WALL ALONG THORPE          | 12"                   | 6'-0"      | 4'-0"               | 2'-0"               | 10"                    | 11'-0"                | 6'-0"                 | #6 AT 14" OC          | (5)#6 | SEE NOTE           | #4 AT 10" OC | VERT WALL REINF: 0'-0" TO 3'-0": #6 AT 14" OC<br>3'-0" AND UP: #5 AT 14" OC |
| WALL ALONG THORPE          | 10"                   | 4'-0"      | 2'-6"               | 1'-6"               | 10"                    | 7'-0"                 | --                    | #5 AT 16" OC          | (4)#5 | #5 AT 16" OC       | #4 AT 10" OC | VERT WALL REINF: 0'-0" TO 3'-0": #6 AT 16" OC<br>3'-0" AND UP: #5 AT 16" OC |
| WALL AT OUTLET TO BIOSWALE | 10"                   | 5'-0"      | 3'-3"               | 1'-9"               | 8"                     | 8'-6"                 | 4'-6"                 | #6 AT 16" OC          | (4)#6 | SEE NOTE           | #4 AT 12" OC | VERT WALL REINF: 0'-0" TO 3'-0": #6 AT 16" OC<br>3'-0" AND UP: #5 AT 16" OC |
| WALL AT OUTLET TO BIOSWALE | 10"                   | 4'-0"      | 2'-6"               | 1'-6"               | 8"                     | 5'-6"                 | --                    | #5 AT 16" OC          | (4)#5 | #5 AT 16" OC       | #4 AT 12" OC |   |

\* REFERENCE SHEETS C5.1 AND C5.2 ADDL INFORMATION FOR THE CHANNEL.

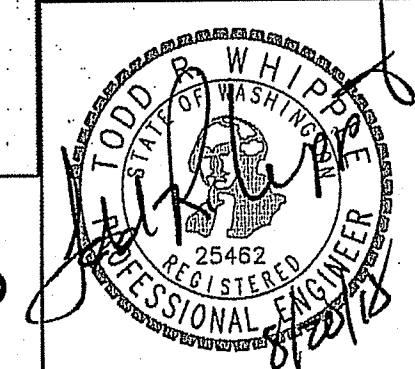
City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public

Not Reviewed

Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted  
 Acceptance Comments



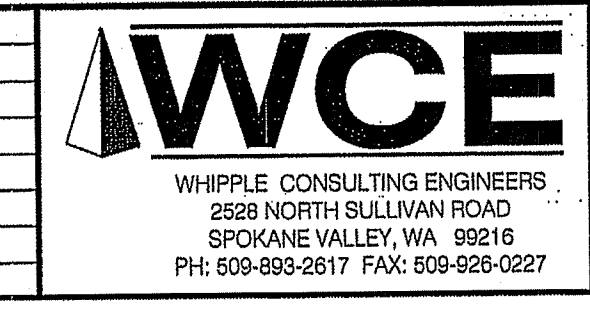
**PLANS NOT APPROVED BY AGENCY**

DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.67 (NAVD29) = 2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: N/A  
 VERTICAL: N/A

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JDK  
 REVIEWED: TRW



**SPOKANE VALLEY PAINTED HILLS PRD  
 RETAINING WALL SECTIONS  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET C6.0**  
 JOB NUMBER 13-1166



SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



$f'_c = 3000\text{psi}$

| BAR SIZE | DEVELOPMENT LENGTH |            |             | LAP SPLICE |            |             |
|----------|--------------------|------------|-------------|------------|------------|-------------|
|          | TENSION            |            | COMPRESSION | TENSION    |            | COMPRESSION |
|          | TOP BARS           | OTHER BARS | ALL BARS    | TOP BARS   | OTHER BARS | ALL BARS    |
| #3       | 22                 | 17         | 9           | 28         | 22         | 12          |
| #4       | 29                 | 22         | 11          | 37         | 29         | 15          |
| #5       | 36                 | 28         | 14          | 47         | 36         | 19          |
| #6       | 43                 | 33         | 17          | 56         | 43         | 23          |
| #7       | 63                 | 48         | 20          | 81         | 63         | 27          |
| #8       | 72                 | 55         | 22          | 93         | 72         | 30          |

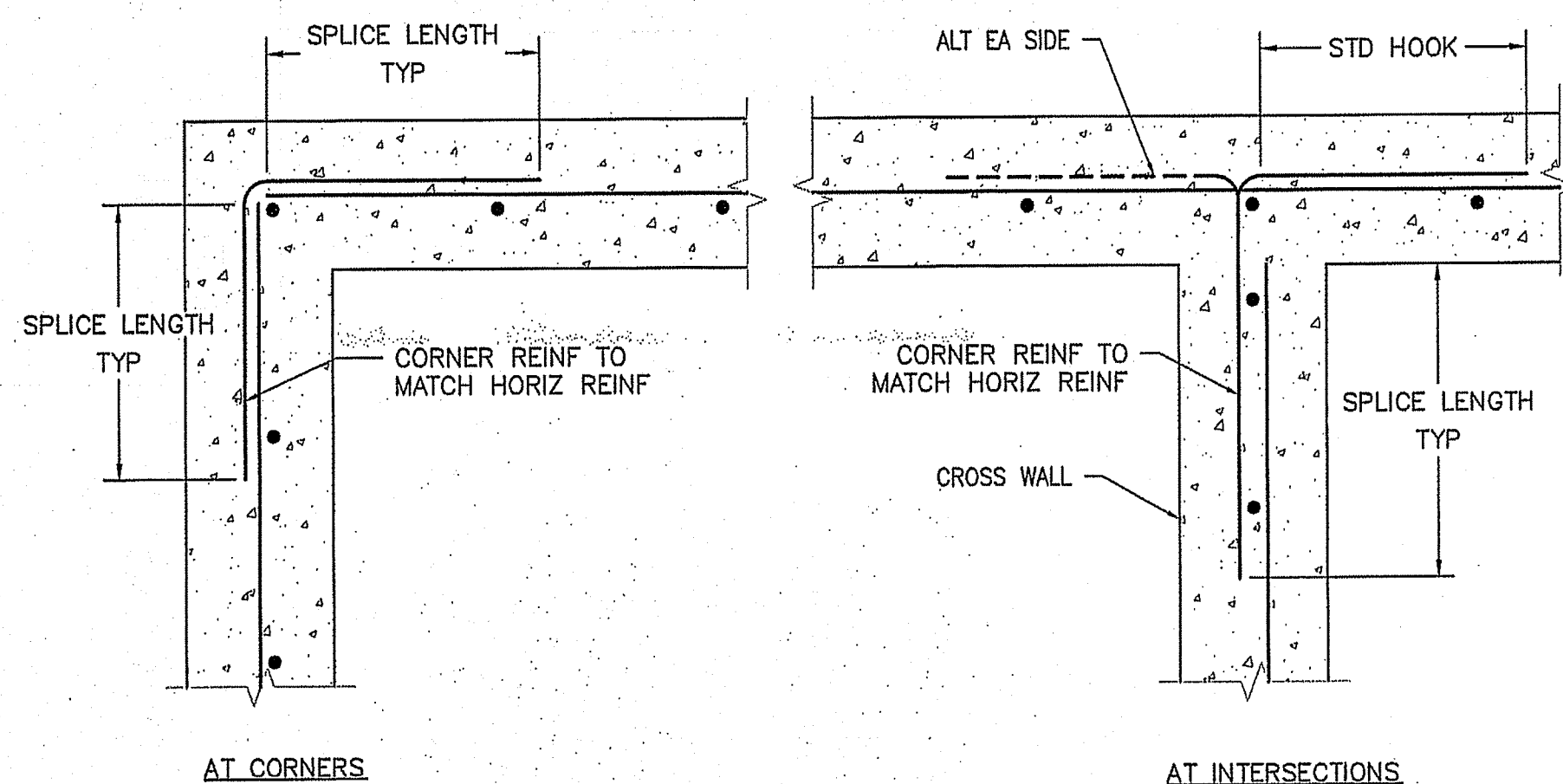
**NOTES:**

- VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING  $> d_b$ , CLEAR COVER  $> d_b$  AND MINIMUM STIRRUPS OR TIES THROUGHOUT  $L_d$  OR CLEAR SPACING  $> 2d_b$  AND CLEAR COVER  $> d_b$ .
- DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH  $L_d$ .
- TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
- UNLESS NOTED OTHERWISE, ALL LAPS SHALL BE MINIMUM CLASS B OR CLASS B (TOP BARS).
- ALL TABULATED VALUES ARE IN INCHES.

**TYPICAL LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE**

NOT TO SCALE

1



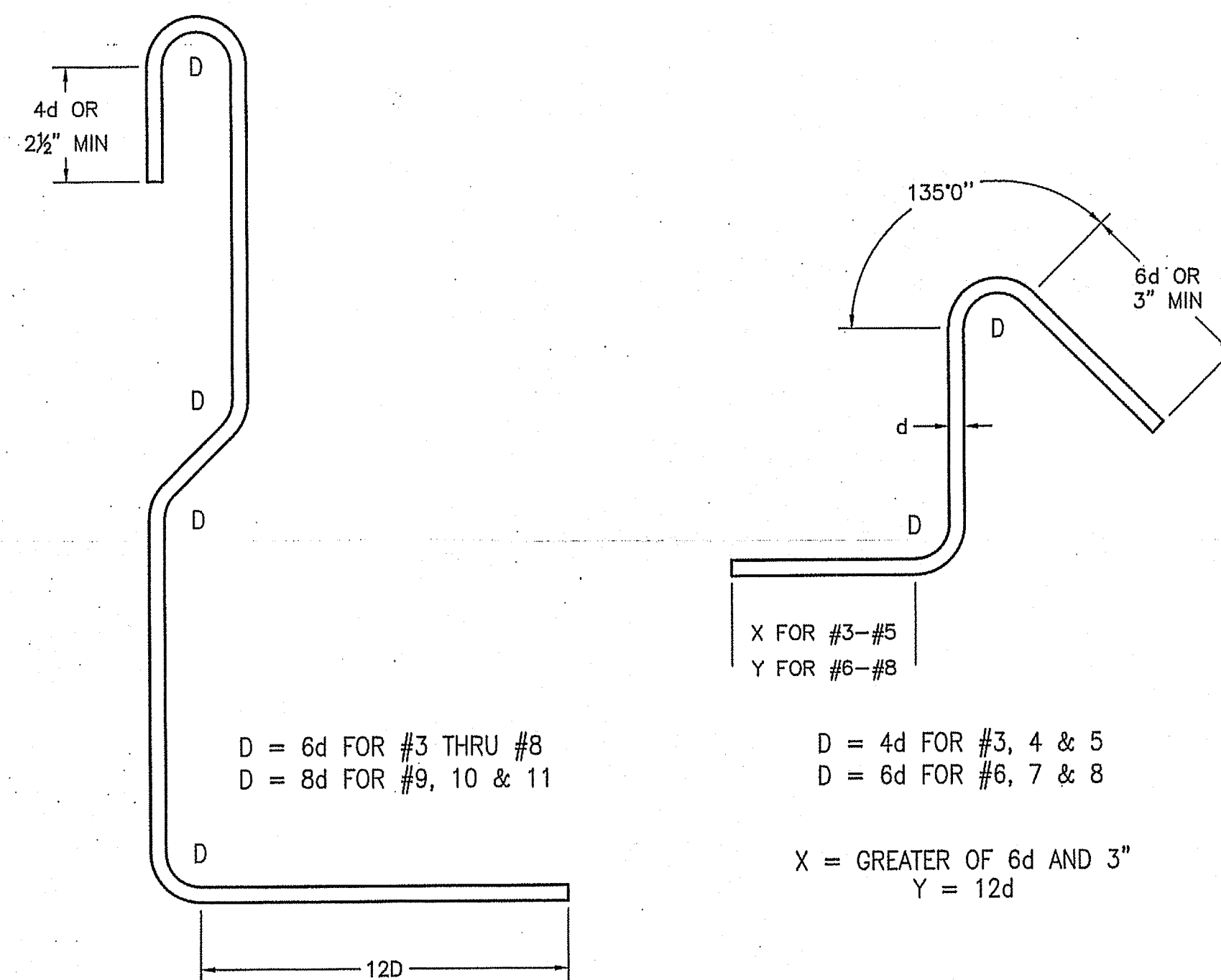
**NOTES:**

- FOR SPLICE LENGTHS, REFERENCE LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE.
- FOR WALL REINFORCING, REFERENCE PLAN.
- AT FOOTING AND STEM WALLS, CORNER REINFORCING TO MATCH FOOTING AND STEM WALL HORIZONTAL REINFORCING.

**TYPICAL CORNER REINF AT CONCRETE WALLS**

NOT TO SCALE

3



**GENERAL DEFORMED BAR REINFORCING (EXCLUDES STIRRUPS AND TIES)**

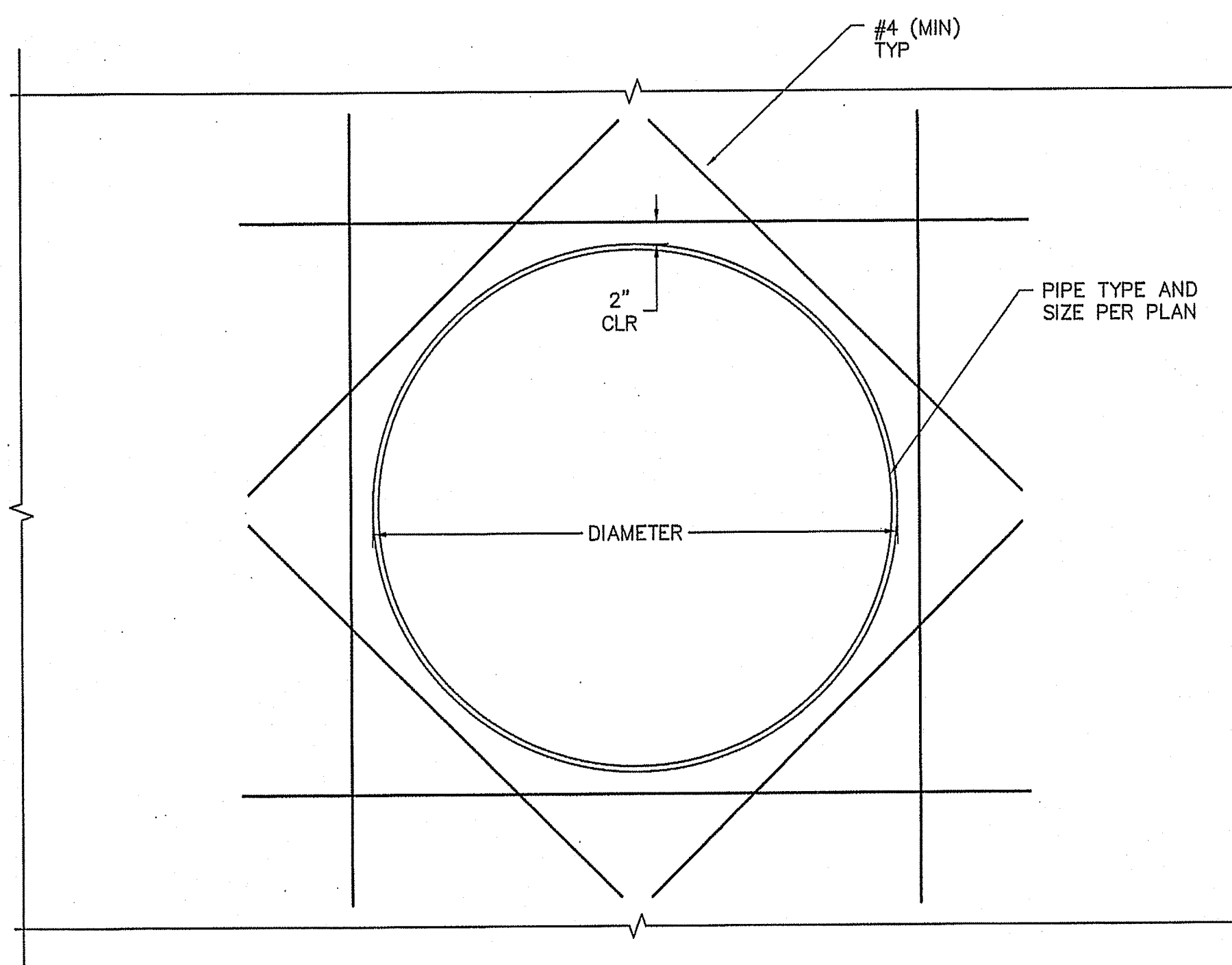
**STIRRUPS AND TIES**

d = DEFORMED BAR DIAMETER, D = BEND DIAMETER

**TYPICAL REBAR BENDING SCHEDULE**

NOT TO SCALE

2



**REINFORCEMENT AT PIPE PENETRATIONS**

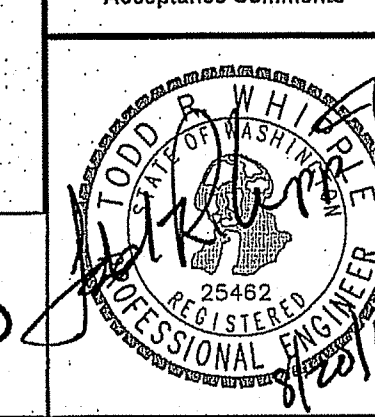
NOT TO SCALE

4

**NOTE:**  
 REFERENCE C6.0 FOR STRUCTURAL GENERAL NOTES AND ADDITIONAL INFO.

PLANS NOT APPROVED BY AGENCY

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 PPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)  
 City of Spokane Valley  
 Development Engineering  
 Reviewer:  
 New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



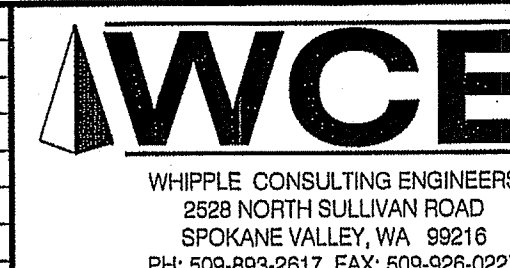
DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.87  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: N/A  
 VERTICAL: N/A

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JDK  
 REVIEWED: TRW

CIVIL  
 X STRUCTURAL  
 SURVEYING  
 TRAFFIC  
 PLANNING  
 LANDSCAPE  
 OTHER



**SPOKANE VALLEY PAINTED HILLS PRD  
 RETAINING WALL DETAILS  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET C6.1**  
 JOB NUMBER 13-1166

**GENERAL NOTES**

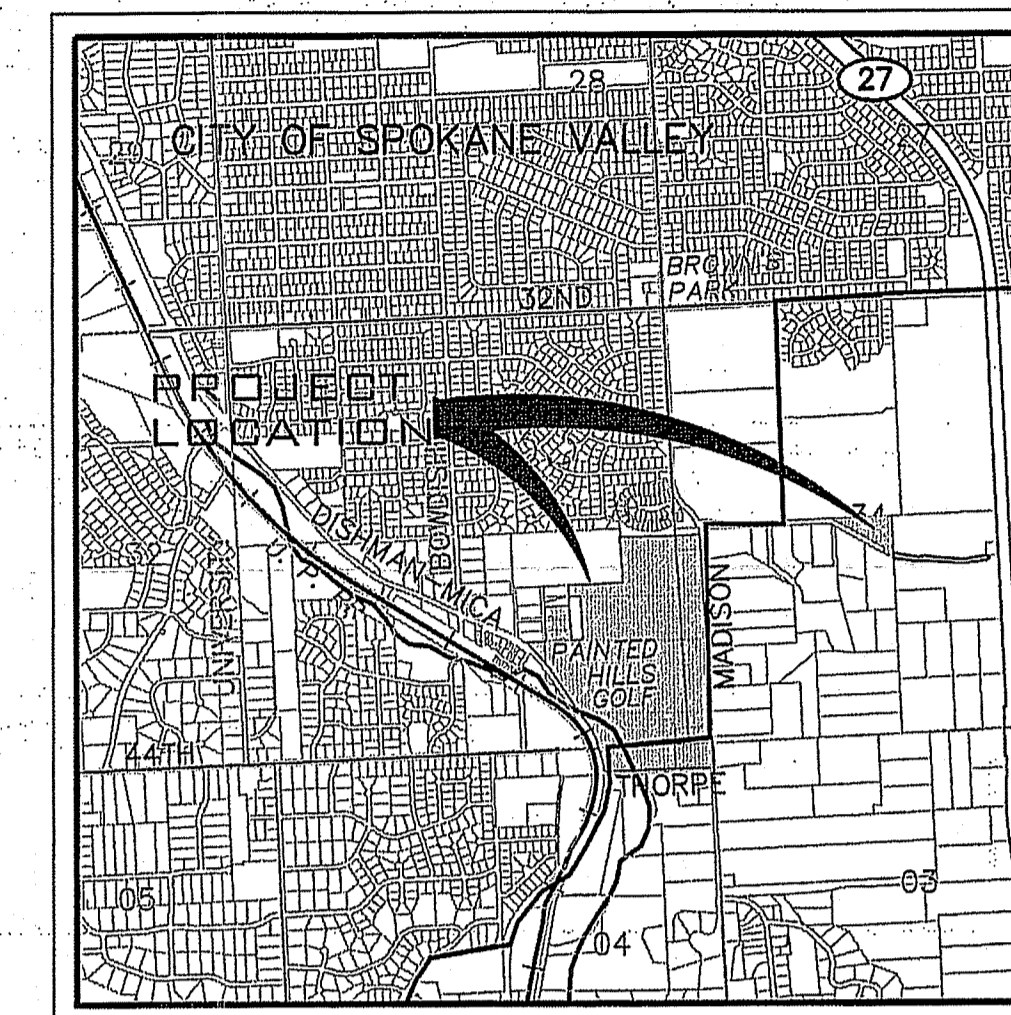
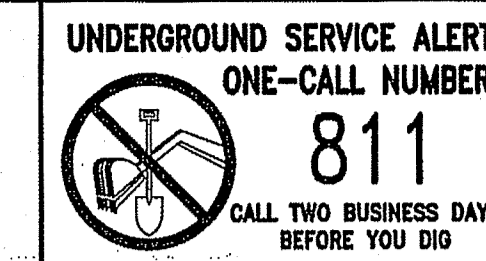
- ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED SITE WORK STANDARDS AND THE STANDARDS AND SPECIFICATIONS SET FORTH IN SPOKANE COUNTY REGULATIONS AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK WITHIN PUBLIC R.O.W. OR EASEMENTS SHALL BE INSPECTED AND APPROVED BY SPOKANE COUNTY INSPECTOR. INSPECTION SERVICES AND CONSTRUCTION CERTIFICATION TO BE PROVIDED BY DESIGNEE OF PROJECT SPONSOR/OWNER.
  - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY SPOKANE COUNTY INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
  - THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH SPOKANE COUNTY AND ALL UTILITY COMPANIES WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION, TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION, AND WITH A MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.
  - THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND ONE (1) COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB ON-SITE AT ALL TIMES.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO: EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
  - IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
  - ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
  - FOR WORK AFFECTING PUBLIC ROADWAYS OR IF REQUIRED BY SPOKANE COUNTY, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL AND PHASING PLAN IN ACCORDANCE WITH M.U.T.C.D. FOR APPROVAL PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN OR AFFECTING THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY SAID PLANS. PRIOR TO INSTALLATION, A PRECONSTRUCTION CONFERENCE SHALL BE HELD WITH SPOKANE COUNTY.
  - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED OR RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
  - PER AGENCY STANDARDS THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING RECORD INFORMATION ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE AND AVAILABLE TO SPOKANE COUNTY INSPECTOR AT ALL TIMES.
  - DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. FOR ADDITIONAL INFORMATION CONTACT THE ENGINEER FOR CLARIFICATION AND NOTE ON THE RECORD DRAWINGS.
  - ALL EROSION AND SEDIMENT CONTROL (E.S.C.) MEASURES SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION PRIOR TO GROUND DISTURBING ACTIVITY. ALL E.S.C. MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.
  - THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTORS SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN, AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.
  - ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY IS SUBJECT TO THE JURISDICTION OF SPOKANE COUNTY ENGINEERING DEPARTMENT STANDARD DETAILS AND SPECIFICATIONS.
  - ALL CONSTRUCTION OPERATIONS, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTH MOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED EQUIPMENT SHALL GENERALLY BE LIMITED TO THE TIME PERIOD APPROVED BY SPOKANE COUNTY.
- BASED ON REQUIREMENTS FROM SPOKANE COUNTY, THE ENGINEER OR HIS DESIGNEE SHALL PERFORM MATERIALS TESTING AND QUALITY CONTROL ON THE PROJECT AND SHALL SUBMIT COPIES OF DAILY REPORTS, TEST REPORTS, PROJECT CERTIFICATION AND RECORD DRAWINGS TO SPOKANE COUNTY ENGINEER.
- NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT APPROVAL OF SPOKANE COUNTY ENGINEERS AND NOTIFICATION OF THE ENGINEER OF RECORD.
  - ON-SITE GRADING SHALL BE IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND E.S.C. PLAN. ANY IMPORT OR EXPORT OF MATERIAL SHALL BE FROM A PREAPPROVED SOURCE/DESTINATION AND COORDINATED WITH THE CITY SPOKANE COUNTY DEPARTMENT OF BUILDING AND PLANNING AT 509-477-3675. GRADING ON THIS SITE OR ANY OTHER SITE MUST COMPLY WITH ALL DEVELOPMENT REGULATIONS INCLUDING, BUT NOT LIMITED TO, GRADING PERMITS, S.E.P.A. REVIEW, TIMBER HARVEST PERMITS, CRITICAL AREAS, FLOOD PLAINS, DESIGNATED DRAINAGE WAYS, ETC.
  - THE CONTRACTOR IS CAUTIONED THAT IT IS THE UNDERSTANDING OF THE OWNER AND THE ENGINEER THAT THESE PLANS, SPECIFICATIONS, GENERAL NOTES OR PLANS E.T.A.L. DETERMINED TO BE PART OF THE OVERALL PROJECT, INCLUDING BUT NOT LIMITED TO THE ARCHITECTURAL PLANS, MECHANICAL PLANS, ELECTRICAL PLANS, LANDSCAPE PLANS, GENERAL SPECIAL PROVISIONS, ETC., THAT WITHOUT WRITTEN CLARIFICATION FROM THE ENGINEER, OWNER OR OTHER PROFESSIONAL, DURING THE BIDDING PROCESS, THAT IN ALL INSTANCES THE CONTRACTOR WILL BE REQUIRED TO BID THE HIGHER STANDARD. FAILURE TO DO SO MAY RESULT IN THE HIGHER STANDARD BEING REQUIRED BY THE OWNER, ENGINEER OR OTHER PROFESSIONAL WITH NO CHANGE IN VALUE TO THE CONTRACT VIA CHANGE ORDER OR OTHER MECHANISM.
  - CONSTRUCTION OF EVERY DRYWELL, INCLUDING FABRIC AND DRAINROCK, SHALL BE OBSERVED BY THE ON-SITE INSPECTOR TO CONFIRM THAT IT MEETS THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.
  - DURING CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ANY AND ALL INCONSISTENCIES BETWEEN THESE PLANS AND CONSTRUCTION STAKING. CONTRACTOR ASSUMES RESPONSIBILITY TO CONSTRUCT TO THESE PLANS IN LIEU OF FIELD STAKING. SHOULD INCONSISTENCIES BE APPARENT THE CONTRACTOR SHALL CONTACT THE ENGINEER, OWNER, AND SURVEYOR TO RECTIFY THE DISCREPANCY PRIOR TO CONSTRUCTION EFFORT BEING APPLIED.

DATUM: NAVD - 88  
 TBM 5-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 5205.67 (NAVD) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

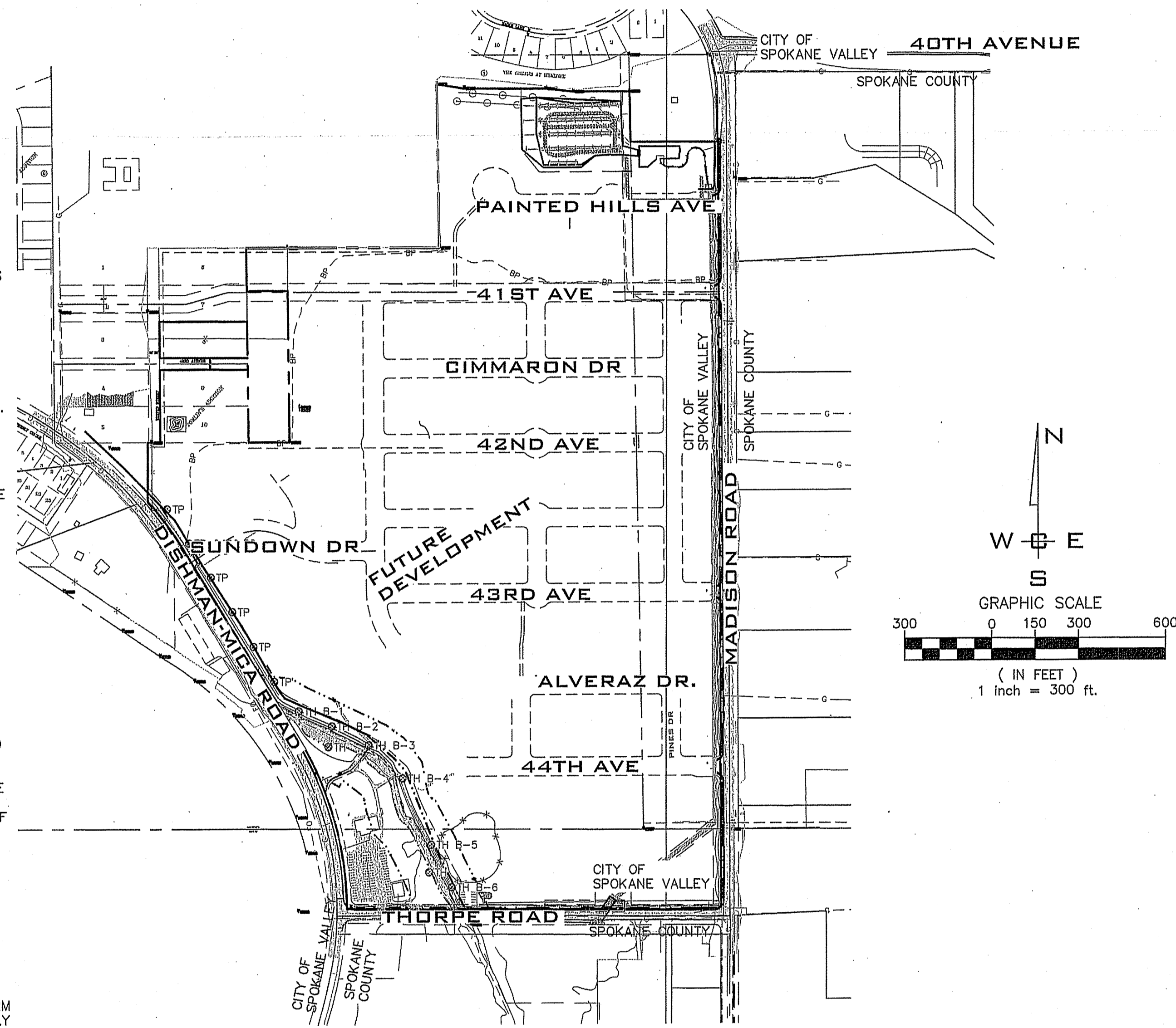
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 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

# PAINTED HILLS WATER PLANS

## LOCATED IN A PORTION OF SE 1/4, SEC. 33, T. 25N., R. 44E., W.M. CITY OF SPOKANE VALLEY, WA

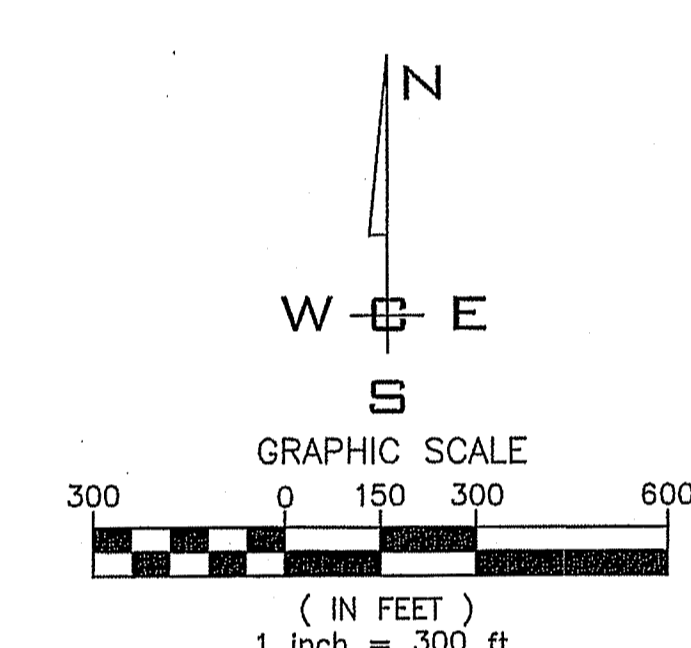


LOCATION MAP



SITE PLAN VIEW

SCALE: 1"=300'



**INDEX TO PLAN SHEETS**

- C7.0 WATER PLAN COVER
- C7.1 WATER PLAN
- C7.2 WATER NOTES AND DETAILS

**WATER SUPPLIER CERTIFICATION STATEMENT**

A. SPOKANE COUNTY WATER DISTRICT #3 HAS APPROVED THIS WATER PLAN FOR PAINTED HILLS PRD. THIS WATER PLAN WILL SATISFY OUR NEEDS IN PROVIDING AN ADEQUATE WATER SYSTEM AND FACILITIES FOR DOMESTIC AND FIRE PROTECTION FOR ALL PARCELS IN THE ABOVE NAMED PLAN.

B. APPROPRIATE CONTRACTUAL ARRANGEMENTS OR AGREEMENTS HAVE BEEN MADE WITH SPOKANE COUNTY WATER DISTRICT #3 FOR CONSTRUCTION OF THE WATER SYSTEM IN ACCORDANCE WITH THIS APPROVED WATER PLAN. SAID CONTRACTUAL ARRANGEMENTS INCLUDE A TIME SCHEDULE ACCEPTABLE TO SPOKANE COUNTY WATER DISTRICT NO. 3 AND COMMIT THE SPONSOR TO INSTALLATION OF INSPECTED SERVICE LINES TO EACH LOT PRIOR TO ANY APPLICATION FOR BUILDING PERMITS FOR SUCH LOTS.

Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

**FIRE DISTRICT CERTIFICATION STATEMENT**

SPOKANE VALLEY FIRE DISTRICT HAS APPROVED THIS WATER PLAN FOR PAINTED HILLS PRD. THIS PLAN IS IN CONFORMANCE WITH OUR REQUIREMENTS AND WILL SATISFY OUR NEEDS IN PROVIDING FIRE HYDRANT LOCATIONS AND TURNAROUND REQUIREMENTS.

Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

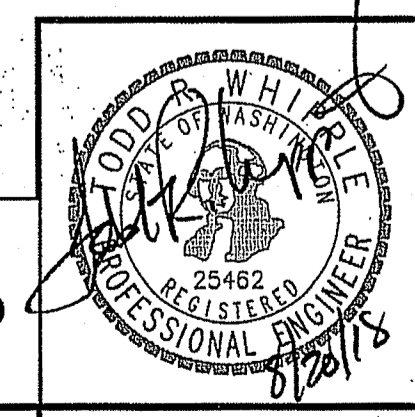
**SPOKANE REGIONAL HEALTH DISTRICT STATEMENT**

THE SPOKANE REGIONAL HEALTH DISTRICT HAS APPROVED THIS WATER PLAN AS HAVING MET ALL APPLICABLE DISTRICT REQUIREMENTS.

Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

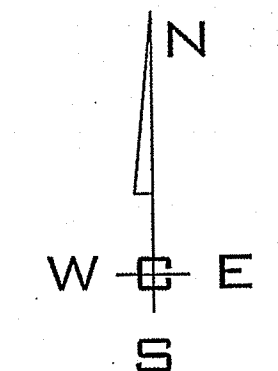
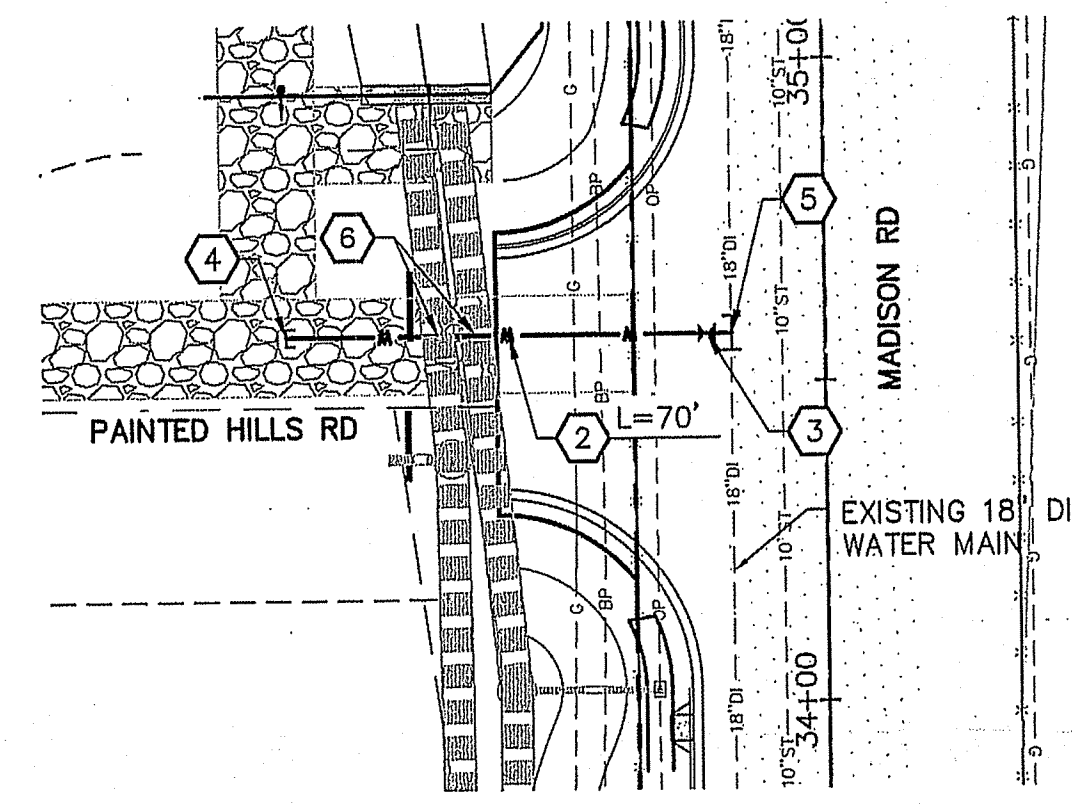
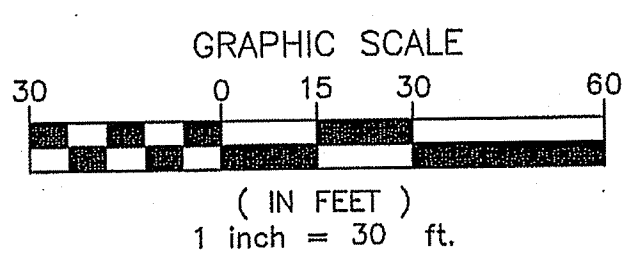
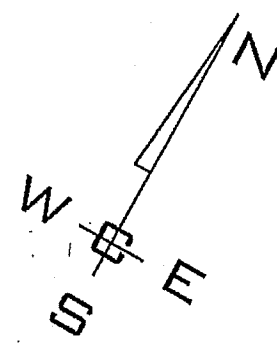
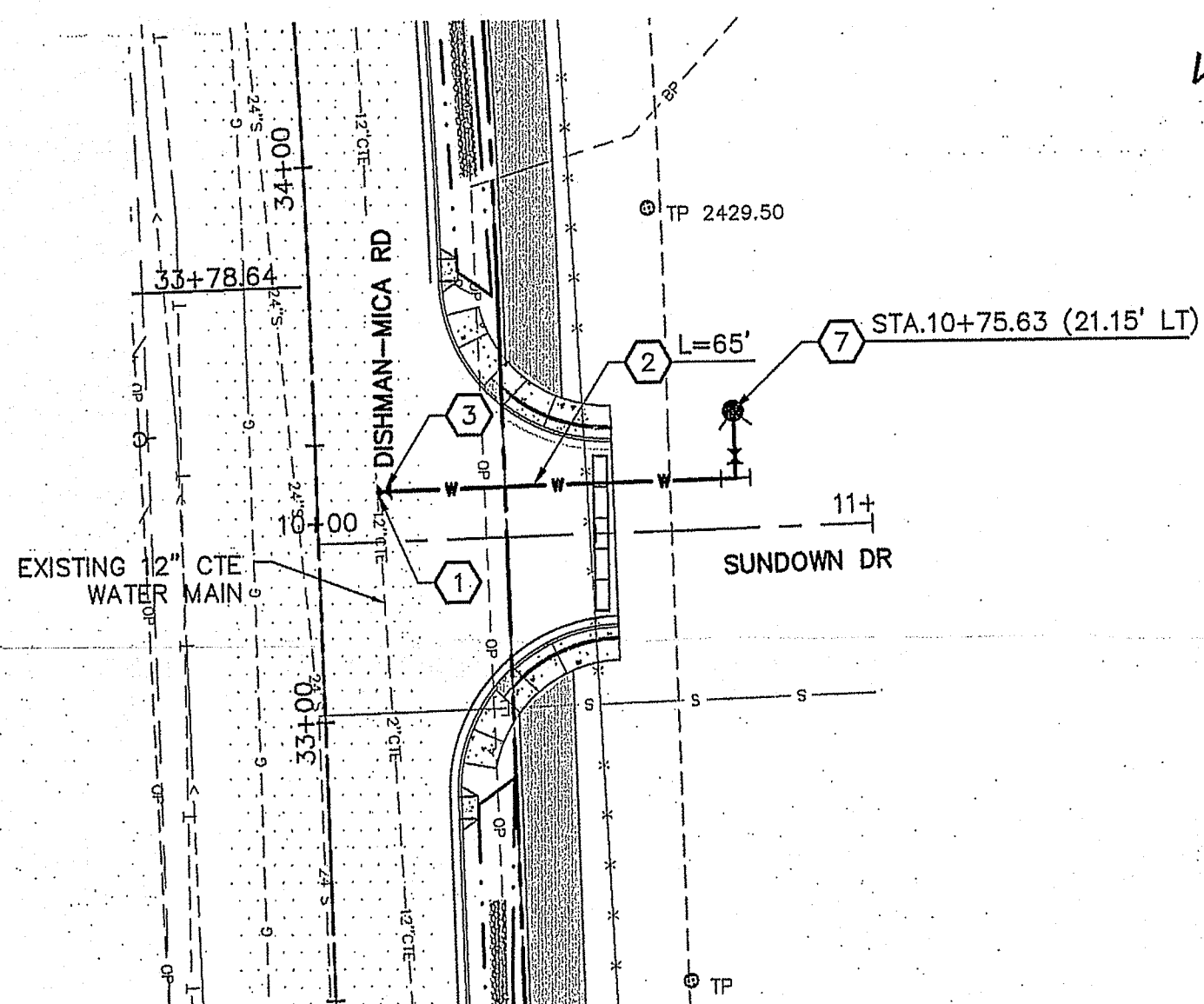
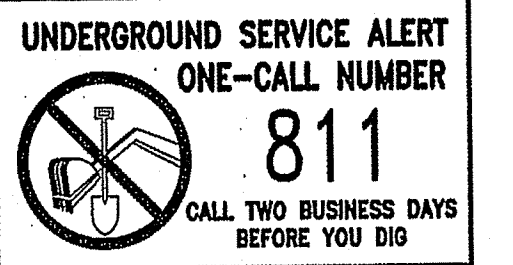
|  |  |  |   |   |
|--|--|--|---|---|
| <p><b>PERMIT SPECIALIST</b><br/>                 CITY OF SPOKANE VALLEY PERMIT CENTER<br/>                 10210 E. SPRAGUE AVE<br/>                 SPOKANE VALLEY, WA 99206<br/>                 PHONE: 720-5240</p> <p><b>DEV. CONST. INSP.</b><br/>                 CITY OF SPOKANE VALLEY<br/>                 10210 E. SPRAGUE AVE<br/>                 SPOKANE VALLEY, WA 99206<br/>                 PHONE: 599-6306<br/>                 CONTACT: KEVIN VAN DYK</p> <p><b>CABLE</b><br/>                 COMCAST BROADBAND<br/>                 1717 E. BUCKEYE AVE<br/>                 SPOKANE, WA 99207<br/>                 PHONE: 755-4717<br/>                 CONTACT: BRYAN RICHARDSON</p> | <p><b>SEWER</b><br/>                 SPOKANE COUNTY ENVIRONMENTAL SERVICES<br/>                 1026 W BROADWAY AVE<br/>                 SPOKANE, WA 99280<br/>                 PHONE: 477-7180<br/>                 CONTACT: CHRIS KNUDSON</p> <p><b>HEALTH</b><br/>                 SPOKANE REGIONAL HEALTH<br/>                 1101 W COLLEGE AVE<br/>                 SPOKANE, WA 99280<br/>                 PHONE: 324-1578<br/>                 CONTACT: PAUL SAVAGE</p> <p><b>SOLID WASTE</b><br/>                 WASTE MANAGEMENT<br/>                 PHONE: 1-866-909-4558</p> | <p><b>WATER</b><br/>                 SPOKANE COUNTY WATER DISTRICT #3<br/>                 1225 N YARDLEY ST<br/>                 SPOKANE, WA 99212<br/>                 PHONE: 536-0121<br/>                 CONTACT: TY WICK</p> <p><b>GAS</b><br/>                 AVISTA UTILITIES<br/>                 1411 E MISSION AVE<br/>                 SPOKANE, WA 99220<br/>                 PHONE: 495-8610<br/>                 CONTACT: MIKE TRUAX</p> <p><b>INSPECTION</b><br/>                 I.P.E.C.<br/>                 P. O. BOX 1566<br/>                 VERADALE, WA 99037<br/>                 PHONE: 209-6262<br/>                 CONTACT: PAUL T. NELSON, P.E.</p> | <p><b>FIRE</b><br/>                 SPOKANE VALLEY FIRE DEPT.<br/>                 2120 N WILBUR RD<br/>                 SPOKANE VALLEY, WA 99206<br/>                 PHONE: 928-1700<br/>                 CONTACT: MIKE MAKELA</p> <p><b>POWER</b><br/>                 INLAND POWER &amp; LIGHT CO.<br/>                 10100 W HALLETT RD<br/>                 SPOKANE, WA 99224<br/>                 PHONE: 509-789-4291<br/>                 CONTACT: CONNIE NELSON</p> <p><b>SURVEYOR</b><br/>                 WHIPPLE CONSULTING ENGINEERS<br/>                 21 S. PINES RD<br/>                 SPOKANE VALLEY, WA 99206<br/>                 PHONE: 893-2617<br/>                 CONTACT: JON GORDON, P.L.S.</p> | <p><b>ROADWAYS</b><br/>                 CITY OF SPOKANE VALLEY<br/>                 11707 E SPRAGUE AVE<br/>                 SPOKANE VALLEY, WA 99206<br/>                 PHONE: 720-5008<br/>                 CONTACT:</p> <p><b>TELEPHONE</b><br/>                 CENTURY LINK<br/>                 904 N COLUMBUS ST<br/>                 SPOKANE, WA 99202<br/>                 PHONE: 623-0305<br/>                 CONTACT: DEBORAH GEIST</p> <p><b>ENGINEERING</b><br/>                 WHIPPLE CONSULTING ENGINEERS<br/>                 21 S. PINES RD<br/>                 SPOKANE VALLEY, WA 99206<br/>                 PHONE: 893-2617<br/>                 CONTACT: TODD WHIPPLE, P.E.</p> <p><b>OWNER</b><br/>                 BLACK REALTY, INC.<br/>                 107 S HOWARD ST<br/>                 SPOKANE, WA 99201<br/>                 PHONE: 623-1000<br/>                 CONTACT: BRYAN WALKER</p> |
|--|--|--|---|---|

|  |   |   |   |  |
|--|---|---|---|--|
| <p><b>SCALE:</b><br/>                 HORIZONTAL: 1"=300'<br/>                 VERTICAL: N/A</p> | <p>PROJ #: 13-1166<br/>                 DATE: 08/14/18<br/>                 DRAWN: JPP<br/>                 REVIEWED: TRW</p> | <p><b>WCE</b><br/>                 WHIPPLE CONSULTING ENGINEERS<br/>                 2628 NORTH SULLIVAN ROAD<br/>                 SPOKANE VALLEY, WA 99216<br/>                 PH: 509-893-2617 FAX: 509-926-0227</p> | <p><b>SPOKANE VALLEY PAINTED HILLS PRD</b><br/> <b>WATER PLAN COVER</b><br/> <b>DISHMAN-MICA RD.</b><br/> <b>SPOKANE VALLEY, WA</b></p> | <p><b>SHEET</b><br/>                 C7.0</p>  |
|  |   |   |   | <p>JOB NUMBER<br/>                 13-1166</p> |

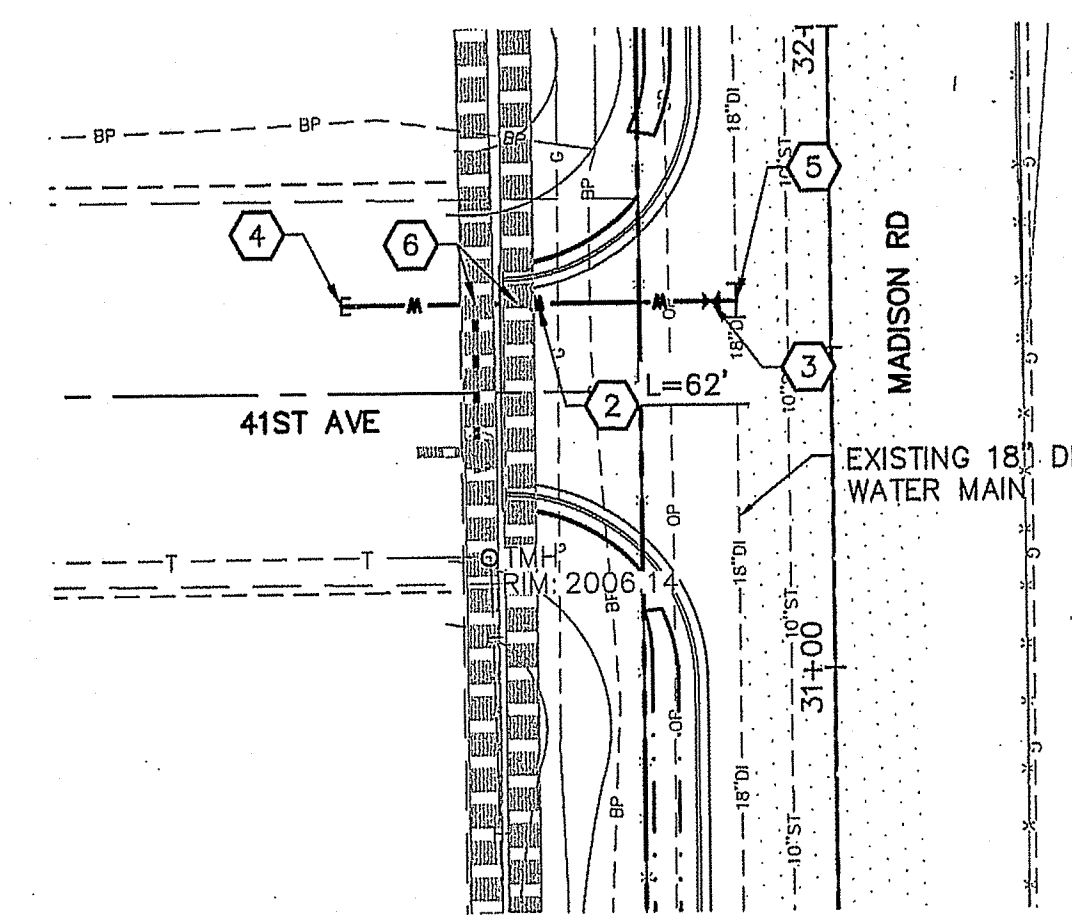


PLANS NOT APPROVED BY AGENCY

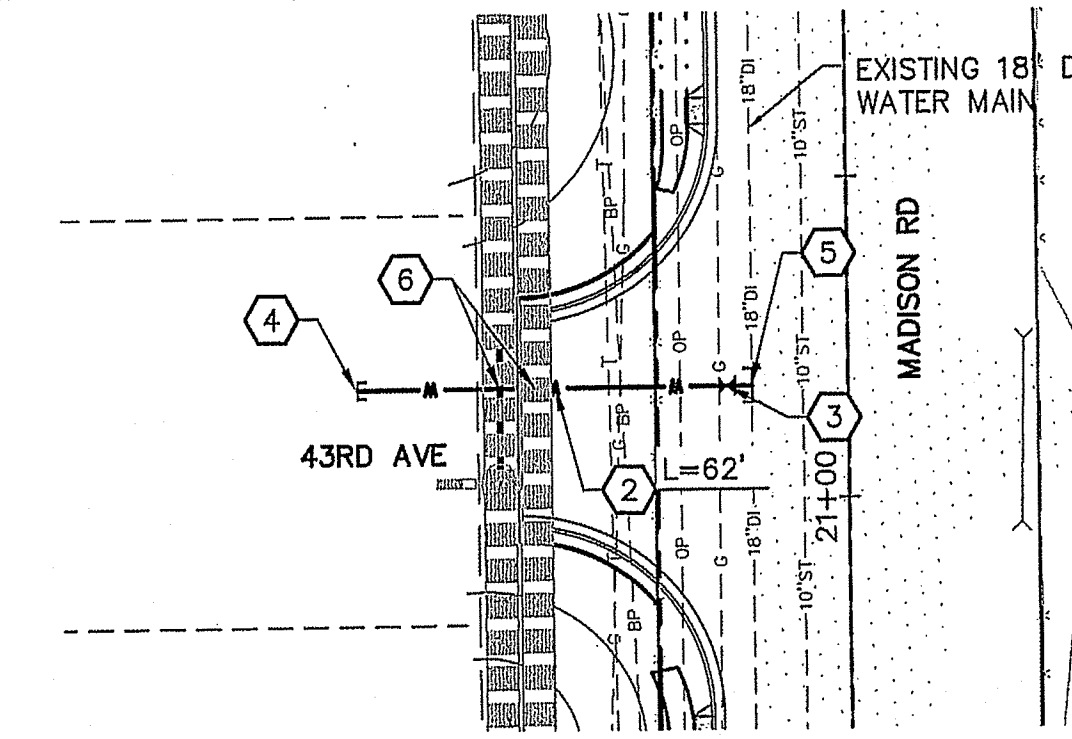
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 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



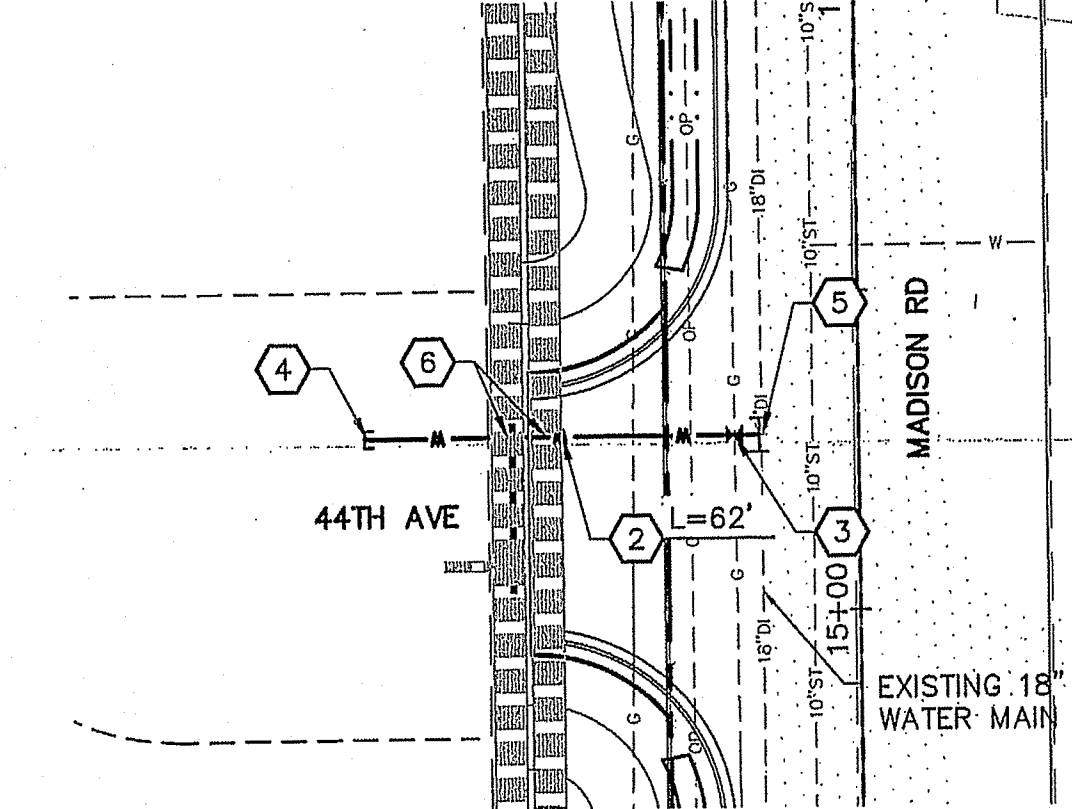
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 A. JOHN & LORRI CLARIZO



45343.9004  
 4105 S. MADISON RD.  
 MICHAEL & POMEROY WACHER



45343.9033  
 4219 S. MADISON RD.  
 TODD & CANDACE GROPP



45343.9005  
 4223 S. MADISON RD.  
 DARYL ARNEY AND SALLY JOHNSTON

**LEGEND**

- PROPERTY LINE
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER

**WATER NOTES**

1. ALL PIPES AND APPURTENANCES SHALL BE DUCTILE IRON.
2. ALL VALVES AND TEES SHALL HAVE MECHANICAL JOINT FITTINGS AND BE FULLY RESTRAINED.
3. WATER SERVICES SHALL BE 1" DIAMETER, TYPE "K" COPPER, AND SHALL EXTEND INSIDE THE PROPERTY LINE PER DETAIL SHEET C7.2. SEE RESTRAINED JOINT TABLE AND DEFLECTION TABLE.

**CONSTRUCTION NOTES**

- 1 SADDLE TAP EXISTING 12" WATER MAIN WITH 8" TAP PER WATER DISTRICT #3 STANDARDS AND SPECIFICATIONS. FITTINGS TO BE SUPPLIED AND INSTALLED BY SPOKANE COUNTY WATER DISTRICT #3. INSTALLATION FEE TO BE PAID FOR BY THE DEVELOPER.
- 2 PROVIDE AND INSTALL 8" DI WATER MAIN PER SPOKANE COUNTY WATER DISTRICT #3 STANDARDS AND SPECIFICATIONS. SEE PLAN FOR DETAILS.
- 3 PROVIDE AND INSTALL 8" GATE VALVE PER SPOKANE COUNTY WATER DISTRICT #3 STANDARDS AND SPECIFICATIONS. FITTINGS TO BE SUPPLIED AND INSTALLED BY SPOKANE COUNTY WATER DISTRICT #3. INSTALLATION FEE TO BE PAID FOR BY THE DEVELOPER.
- 4 PROVIDE AND INSTALL 8" END CAP AND TEMPORARY FLUSHER BLOWOFF ASSEMBLY PER WATER DISTRICT #3 STANDARDS AND SPECIFICATIONS. SEE SHEET C7.2 FOR FLUSHER BLOWOFF ASSEMBLY DETAIL. MARKER POST PAINTED BLUE WITH TRACER WIRE.
- 5 SADDLE TAP EXISTING 18" WATER MAIN WITH 8" TAP PER WATER DISTRICT #3 STANDARDS AND SPECIFICATIONS. FITTINGS TO BE SUPPLIED AND INSTALLED BY SPOKANE COUNTY WATER DISTRICT #3. INSTALLATION FEE TO BE PAID FOR BY THE DEVELOPER.
- 6 LOWER WATER MAIN TO MAINTAIN REQUIRED SEPARATION PER SPOKANE COUNTY WATER DISTRICT #3. SEE DETAIL 3 PER SHEET C7.2.
- 7 PROVIDE AND INSTALL 6" FIRE HYDRANT ASSEMBLY WITH BLIND FLANGE PER SPOKANE COUNTY WATER DISTRICT #3 STANDARDS AND SPECIFICATIONS. FITTINGS TO BE SUPPLIED AND INSTALLED BY SPOKANE COUNTY WATER DISTRICT #3. INSTALLATION FEE TO BE PAID FOR BY THE DEVELOPER. SEE SHEET C7.2 FOR DETAIL.

NOTE:  
 THRUST BLOCKING REQUIRED AT ALL BENDS, TEES, WYES, CAPS, AND PLUGS PER SPOKANE COUNTY WATER DISTRICT #3 STANDARDS, SEE TABLE SHEET C7.2.

**SPOKANE COUNTY WATER DISTRICT #3 NOTES**

1. WATER MAINS SHALL BE CLASS 50 DUCTILE IRON PIPE. UPON PRIOR WRITTEN APPROVAL, C-900, CLASS 150 PVC PIPE MAY BE USED WITHIN PUBLIC RIGHTS-OF-WAY WHERE SOIL CONDITIONS ARE SUCH THAT IMPORTATION OF BEDDING MATERIAL IS UNNECESSARY; AND WHERE THE PIPE DIAMETER IS EQUAL TO OR LESS THAN 8-INCHES.
2. ALL CONSTRUCTION MATERIAL AND PRACTICES SHALL BE IN ACCORDANCE WITH SCWD#3 REQUIREMENTS AS APPROVED IN THE DISTRICT'S COMPREHENSIVE PLAN DATED SEPTEMBER 3, 2008.
  - 2.1. PIPE RESTRAINT INCLUDES THE USE OF ROMAC "GRIP" RING ACCESSORY KITS ON ALL MJ FITTINGS IN ADDITION TO FIELD "LOK" GASKETS IN ACCORDANCE WITH THE DUCTILE IRON PIPE RESTRAINT TABLE AND CONCRETE THRUST BLOCKS.
3. CONSTRUCTION SHALL BE COORDINATED WITH SCWD#3. A PRE-CONSTRUCTION MEETING WITH SCWD#3 REPRESENTATIVES SHALL BE HELD PRIOR TO STARTING CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE FOR HYDROSTATIC PRESSURE TESTING AND BACTERIOLOGICAL WATER QUALITY TESTING OF NEW WATER MAINS. WATER MAINS SHALL BE PRESSURE TESTED AT 180 PSI AND CHLORINATED PER AWWA C-651.
5. ALL REQUIRED WATER LINE SHUTDOWNS SHALL BE COORDINATED WITH SCWD#3. ALL CUSTOMERS AFFECTED BY THE SHUTDOWN SHALL BE NOTIFIED BY THE CONTRACTOR 24 HOURS IN ADVANCE.
6. ALL PVC PIPE SHALL HAVE A #12 GAUGE INSULATED SINGLE STRAND COPPER TRACER WIRE. THE TRACER WIRE IS TO BE INSTALLED ON MAIN LINE GATE VALVES FROM VALVE TO VALVE AS PER SCWD#3 STANDARD GATE VALVE DETAIL. NOTE: DO NOT INSTALL TRACER WIRE ON HYDRANT VALVES.
7. DUCTILE IRON PIPE SHALL HAVE THREE (3) CONTINUITY WEDGES INSTALLED PER EACH JOINT.
8. ALL BACKFILL MATERIAL SHALL BE DRY AND NOT FROZEN.
9. ALL INDIVIDUAL WATER METER BOXES/VAULTS SHALL BE LOCATED WITHIN THE PUBLIC RIGHT OF WAY AND/OR UTILITY EASEMENT. TYPICALLY, NO WATER METER BOXES/VAULTS ARE TO BE LOCATED WITHIN DRIVEWAYS. PLACEMENT OF WATER METER BOXES/VAULTS ARE TO BE WITHIN LANDSCAPED AREAS.
10. A MINIMUM OF 10' HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN WATER SERVICES AND ELECTRICAL POWER TRANSFORMERS.
11. ELECTRICAL POWER & GAS LINES MUST BE A MINIMUM OF 5'-0" AWAY FROM FIRE HYDRANTS.
12. ALL PROPERTY LINES AND RIGHTS-OF-WAY SHALL BE STAKED PRIOR TO MAIN INSTALLATION.
13. NO WATER METER BOXES/VAULTS SHALL BE LOCATED WITHIN DRAINAGE AREAS SUCH AS GRASSY 208 (SWALE AREAS) WHERE THEY MAY FILL WITH WATER.
14. FINAL LOCATION OF WATER MAIN METER SETTINGS SHALL BE DETERMINED BY SCWD#3.
15. WATER & SEWER MAIN SEPARATION
  - 15.A. HORIZONTAL SEPARATION BETWEEN A WATER MAIN AND A SEWER MAIN MUST BE A MINIMUM OF 10 FEET.
  - 15.B. VERTICAL SEPARATION BETWEEN A WATER MAIN AND A SEWER MAIN MUST BE A MINIMUM OF 18 INCHES. IF VERTICAL SEPARATION IS NOT ATTAINABLE SEE NOTE C2.
  - 15.C. PLEASE SEE SPECIFIC NOTES AS FOLLOWS
    - 15.C.1. IF THE SEWER MAIN IS MADE OF THE SAME OR BETTER QUALITY MATERIAL AS THE WATER MAIN, THEN NO CASING IS REQUIRED.
    - 15.C.2. IF THE SEWER MAIN IS NOT MADE OF EQUAL OR BETTER MATERIALS, OR PROPER SEPARATION CANNOT BE MAINTAINED THEN IT MUST BE PLACED INSIDE A CASING TO BE APPROVED BY SCWD#3, AND EXTEND 10 FEET IN EACH DIRECTION WHERE THE SEWER MAIN CROSSES THE WATER MAIN.
16. PRE CAST CONCRETE THRUST BLOCKS MAY BE USED AS MANUFACTURED BY WHITE BLOCK OR APPROVED EQUAL.
17. SIZE OF THRUST BLOCKS: SMALL 5" X 18" X 24" LARGE 6" X 24" X 36".
18. COMPACTION BEHIND INSTALLED THRUST BLOCKS SHALL BE A MINIMUM OF 95% OR BETTER.
19. AIR VACUUM RELIEF VALVE(S) SHALL BE INSTALLED AS DIRECTED BY SCWD#3 PER FIELD ELEVATION CONDITIONS. THESE LOCATIONS MAY OR NOT BE AS SHOWN ON THE APPROVED WATER SYSTEM PLAN.
20. A MINIMUM DISTANCE OF 5'-0" MUST BE MAINTAINED FROM CHANGES IN FINAL GRADE ELEVATION TO ALL WATER SYSTEM APPURTENANCES (IE, MAINS, FIRE HYDRANTS, VALVE BOXES, WATER METERS, VAULTS ETC.)

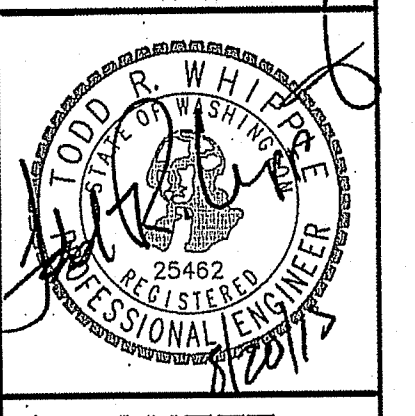
DATUM: NAVD - 88  
 TBM 8-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.87  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

|                    |                        |
|--------------------|------------------------|
| <b>SCALE:</b>      | <b>PROJ #:</b> 13-1166 |
| <b>HORIZONTAL:</b> | <b>DATE:</b> 08/14/18  |
| 1"=30'             | <b>DRAWN:</b> JPP      |
| <b>VERTICAL:</b>   | <b>REVIEWED:</b> TRW   |
| N/A                |                        |

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2828 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-893-2617 FAX: 509-926-0227

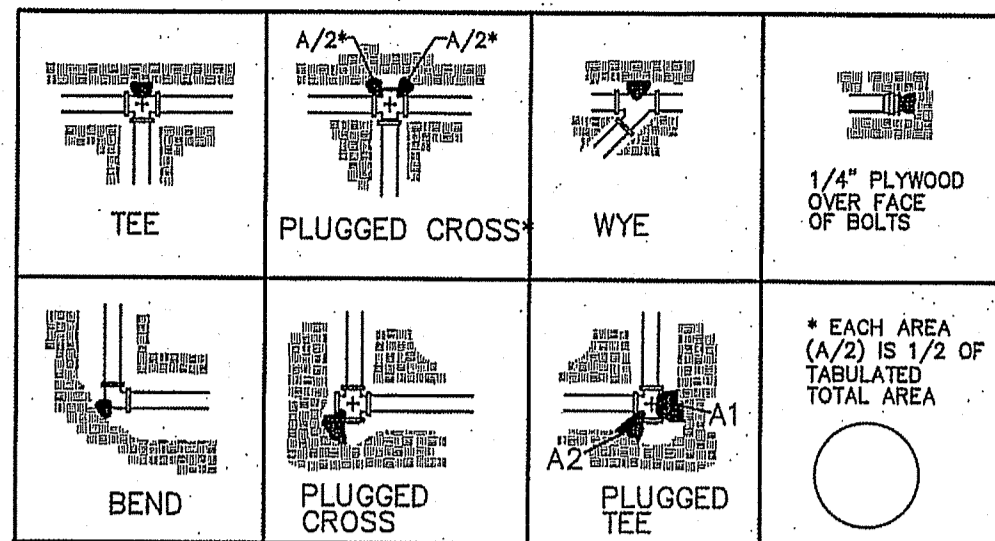
**SPOKANE VALLEY PAINTED HILLS PRD**  
**WATER PLAN**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**



**PLANS NOT APPROVED BY AGENCY**

**SHEET C7.1**

JOB NUMBER  
**13-1166**



**BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)**

| FITTING SIZE | TEE, WYE, 90° BEND PLUG, OR CROSS |      | TEE PLUGGED RUN |      | BEND ANGLE |      |
|--------------|-----------------------------------|------|-----------------|------|------------|------|
|              | A1                                | A2   | A1              | A2   | 45         | 22.5 |
| 4            | 1.0                               | 1.4  | 1.9             | 1.4  | 1.0        | —    |
| 6            | 2.1                               | 3.0  | 4.3             | 3.0  | 1.6        | 1.0  |
| 8            | 3.8                               | 5.3  | 7.6             | 5.4  | 2.9        | 1.5  |
| 10           | 5.9                               | 8.4  | 11.8            | 8.4  | 4.6        | 2.4  |
| 12           | 8.5                               | 12.0 | 17.0            | 12.0 | 6.6        | 3.4  |
| 14           | 11.5                              | 16.3 | 23.0            | 16.3 | 8.9        | 4.6  |
| 16           | 15.0                              | 21.3 | 30.0            | 21.3 | 11.6       | 6.0  |
| 18           | 19.0                              | 27.0 | 38.0            | 27.0 | 14.6       | 7.6  |
| 20           | 23.5                              | 33.3 | 47.0            | 33.3 | 18.1       | 9.4  |
| 24           | 34.0                              | 48.0 | 68.0            | 48.0 | 26.2       | 13.6 |

**SWD3 - THRUST BLOCKS**

**THRUST BLOCK NOTES**

- KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES
- CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
- REQUIRED VOLUMES OR BEARING AREAS AT FITTING SHALL BE AS INDICATED BELOW, ADJUSTED, IF NECESSARY, TO CONFORM TO THE TEST PRESSURE(S) AND ALLOWABLE BEARING STRESS(ES) STATED IN THE SPECIFICATIONS.
- THRUST BLOCK VOLUMES FOR VERTICAL BENDS HAVING UPWARD RESULTANT THRUSTS SHALL BE AS DESCRIBED IN STANDARD DETAIL W-7.
- BEARING AREAS FOR HORIZONTAL BEND THRUST BLOCKS ARE BASED ON TEST PRESSURE OF 150 P.S.I.G. AND AN ALLOWABLE SOIL BEARING STRESS OF 2000 LBS/SQ FT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, MULTIPLY TABLE VALUES BY THE FACTOR (13.33)(P'/S'b), WHERE: P' = ACTUAL TEST PRESSURE, P.S.I.G. S'b = ACTUAL SOIL BEARING PRESSURE, P.S.F..
- THRUST BLOCKS FOR VERTICAL BENDS HAVING DOWNWARD RESULTANT THRUSTS SHALL BE THE SAME AS FOR HORIZONTAL BENDS.
- BEARING AREAS, VOLUMES, AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER THIS STANDARD.
- BEARING AREA OF THRUST BLOCK SHALL NOT BE LESS THAN 1.0 SQ FT.
- VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 5 CUBIC YARDS REQUIRE SPECIAL BLOCKING DETAILS. SEE PLANS FOR VOLUMES SHOWN TO LEFT OF SOLID LINE IN TABLE.
- TEST PRESSURES ARE DESCRIBED IN THE NOTES.
- CONSULT SOIL ENGINEER FOR ACTUAL SOIL BEARING PRESSURE.

BASED ON 75% OF MAXIMUM DEFLECTION BY SPECIFICATION

| SIZE OF PIPE IN. | MAX. PERMISSIBLE DEFLECTION PER LENGTH - IN. |               | APPROX. RADIUS OF CURVE PROVIDED BY SUCCESSION OF JOINTS - FT. |               |
|------------------|--|---------------|--|---------------|
|                  | 18-FT. LENGTH                                | 20-FT. LENGTH | 18-FT. LENGTH  | 20-FT. LENGTH |
| 4                | 23   | 26            | 105  | 105           |
| 6                | 20   | 22            | 108  | 120           |
| 8                | 15   | 17            | 146  | 165           |
| 12               | 15   | 17            | 146  | 165           |

**DEFLECTION TABLE**

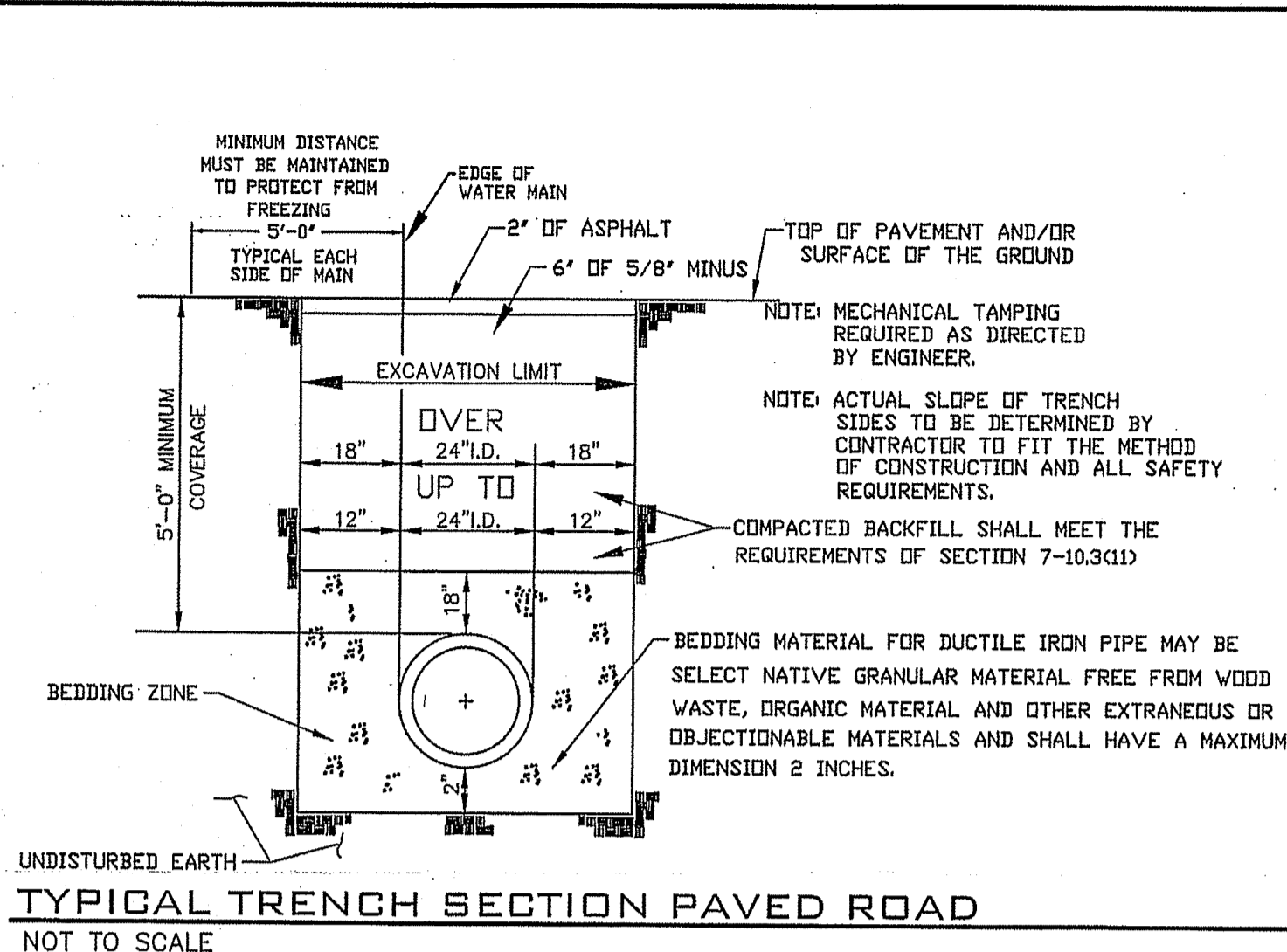
MAXIMUM PERMISSIBLE DEFLECTION IN LAYING MECHANICAL JOINT PIPE

| PIPE DIAMETER | VOLUME OF THRUST BLOCKING (SQ. FT.) |          |              |              |
|---------------|-------------------------------------|----------|--------------|--------------|
|               | 90° BEND                            | 45° BEND | 22 1/2° BEND | 11 1/4° BEND |
| 6"            | 5.288                               | 2.862    | 1.459        | .733         |
| 8"            | 9.097                               | 4.923    | 2.510        | 1.261        |
| 10"           | 13.685                              | 7.406    | 3.776        | 1.897        |
| 12"           | 19.353                              | 10.474   | 4.340        | 2.683        |

**NOTE:**

THRUST BLOCK VOLUME BASED ON 4000 lbs/cu. yd. FOR CONCRETE AND A HYDRAULIC TEST PRESSURE OF 180 psi. THRUST BLOCK VOLUMES SHALL BE PROPORTIONALLY ADJUSTED FOR DIFFERENT HYDRAULIC TEST PRESSURES.

**VERTICAL THRUST BLOCKING TABLE**



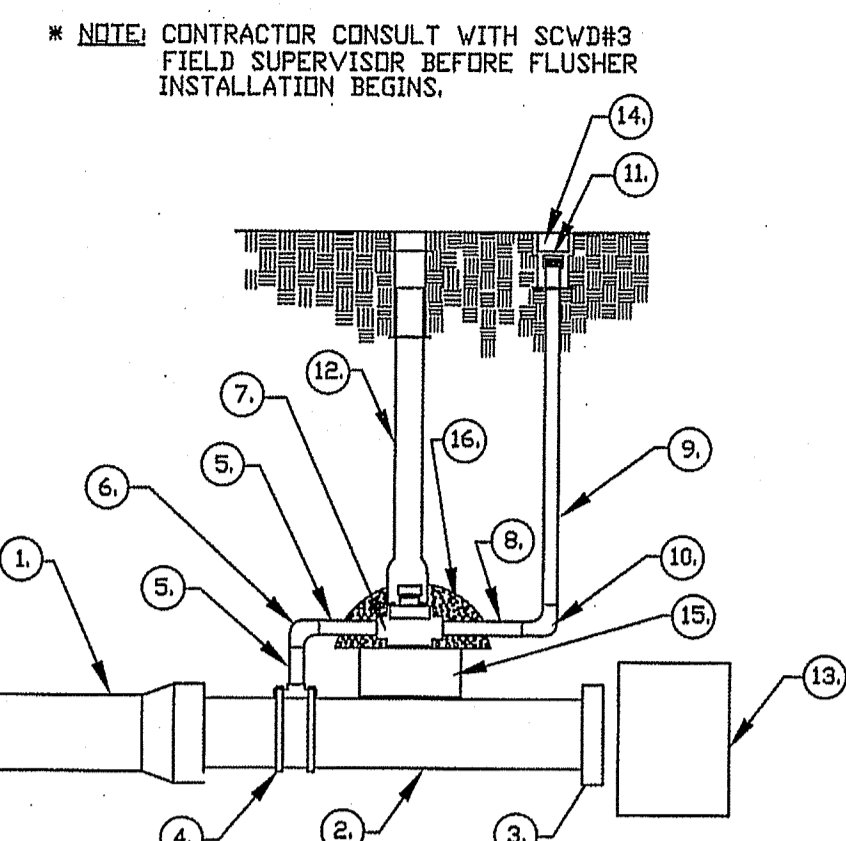
**TYPICAL TRENCH SECTION PAVED ROAD**

NOT TO SCALE

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

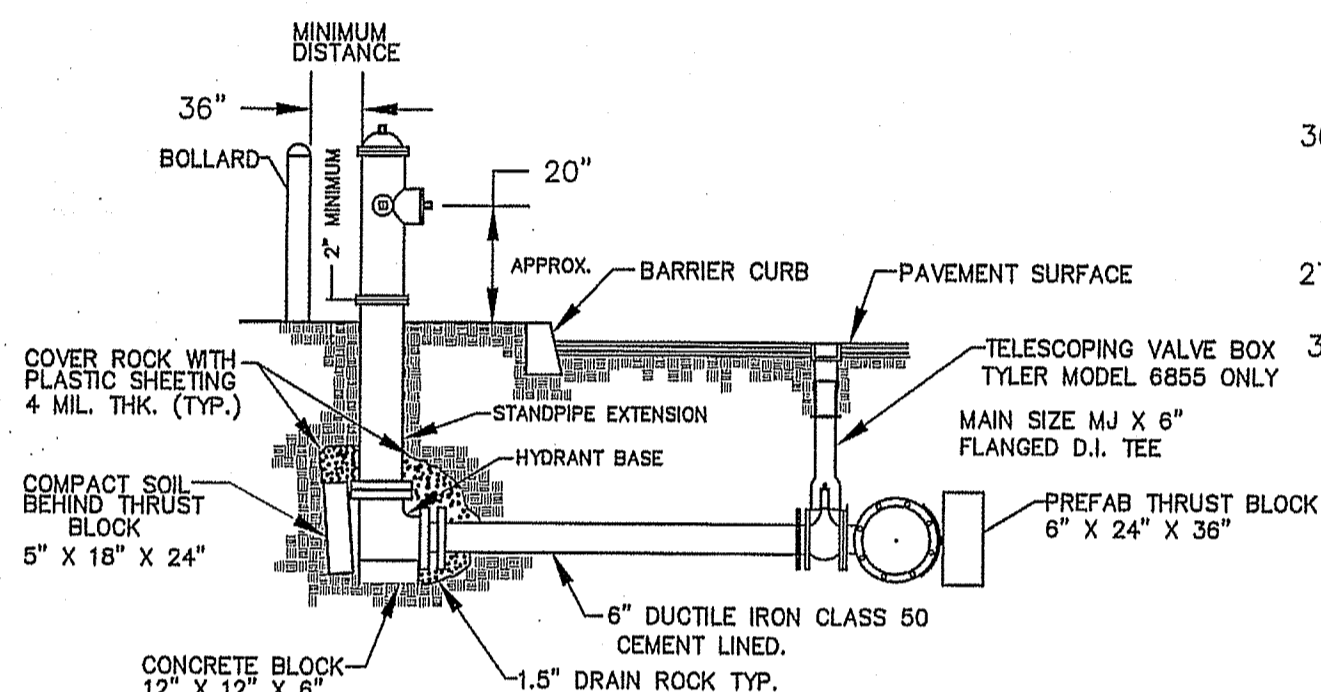
- WATER MAIN NEW OR EXISTING (BELL END OF PIPE)
- PIECE OF PIPE APPROX. 3' LONG (MAIN SIZE)
- MJ LINE CAP (MAIN SIZE)
- TAPPING SADDLE WITH S.S. STRAPS (SIZE AS PER MAIN)
- BRASS NIPPLE 2" X 3"
- 2" BRASS ELBOW 90°
- 2" FE X FE STOP & WASTE VALVE
- 2" X 12" GALVANIZED NIPPLE
- 2" X 48" GALVANIZED NIPPLE
- 2" GALVANIZED 90° ELBOW
- 2" GALVANIZED CAP
- VALVE BOX
- THRUST BLOCK 6" X 24" X 36"
- VALVE BOX TOP SECTION
- SUPPORT MATERIAL \*
- SIZE OF DRAIN ROCK IS 1.5, COVER WITH 4MIL POLY SHEETING

\*NOTE: USE A THRUST BLOCK 6" X 24" X 36" ON WATER MAINS 4" THRU 10" DIAMETER WATER MAINS, 12" & GREATER IN DIAMETER USE 2" X 2" 6" ECOLOGY BLOCK BY CENTRAL PRE MIX OR APPROVED EQUAL



**FLUSHER-BLOWOFF ASSEMBLY**

NOT TO SCALE



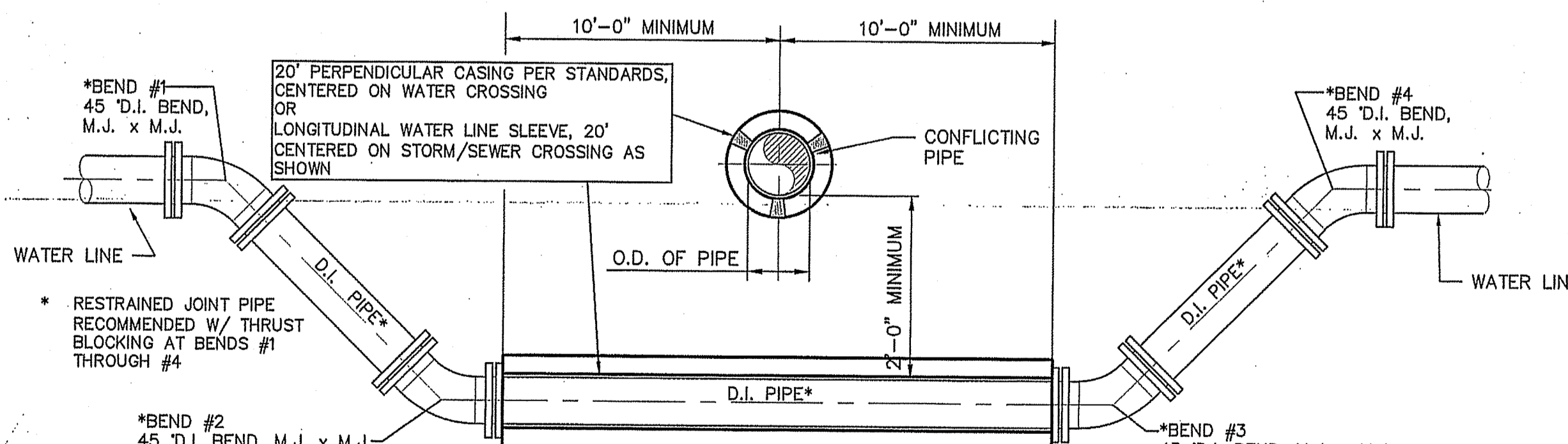
**6" FIRE HYDRANT SETTING**

NOT TO SCALE

**NOTES**

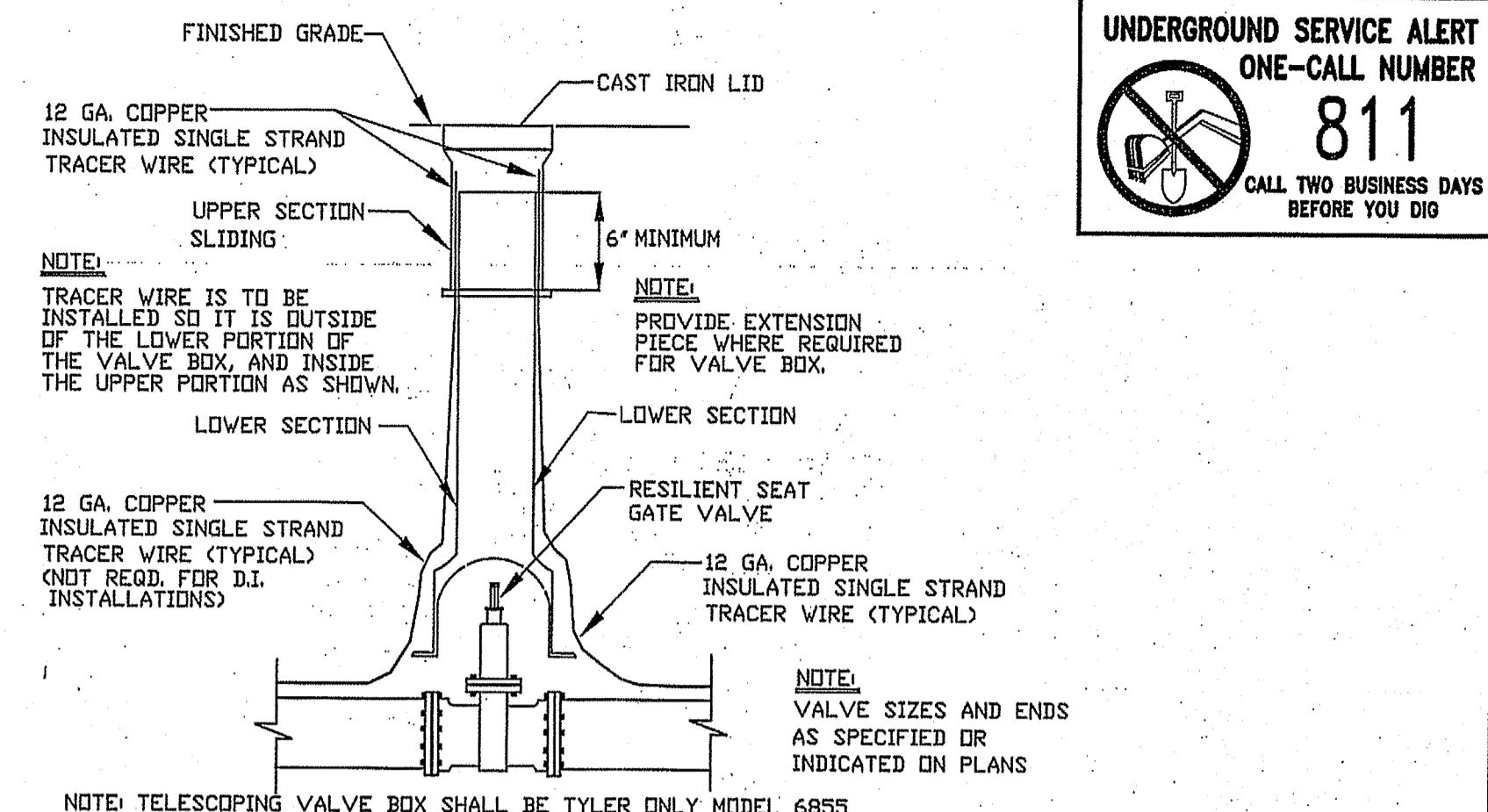
- All fire hydrants shall be 6" compression type, breakaway section at ground level. 5 1/4" main valve opening, two 2 1/2" hose nozzles, and one 4 1/2" pumper nozzle, threads to conform to national standard thread fire hose coupling, with 6" MJ connection as manufactured by M & H, Mueller, US Pipe Metroflow/M-03.
- The Concrete Block (shown below on detail) shall have a 12" X 12" base and a minimum 3" thickness.
- All valves shall have a resilient seat non-rising stem, 2" operating nut, (FL X MJ) and shall meet A.W.W.A. standards at working pressure of 150 lbs.
- Fire hydrants are to be installed per Spokane County Water District #3 requirements.
- Distances from main to hydrant in excess of one length of pipe shall be made utilizing FIELD LOCK GASKETS and pipe as manufactured by U.S. Pipe or approved equal.
- Protective Bollards may be required as directed by the Spokane County Water District #3
- MJ Accessories for valve and hydrant shall be RDMAC Grip Rings.
- Minimum 5 feet bury on hydrant.
- Precast Thrust Blocks need 95% Compaction between Thrust Block & Undisturbed earth.
- Fire Hydrant is to be Painted Yellow (As Per Local Fire District Specs.)
- THE ISOLATION VALVE FOR THE FIRE HYDRANT MUST BE A MINIMUM OF 4 FEET FROM THE FLANGE OF THE HYDRANT BASE.
- CENTER LINE OF FIRE HYDRANT MUST BE A MINIMUM OF 2 FEET BEHIND THE CURB OR SIDEWALK.

**NOTE:**  
CONTRACTOR TO TAKE NOTE, WHERE WATER LINES CONFLICT WITH STORM AND SEWER PIPE, THE WATER LINES SHALL BE ROUTED UNDER SUCH PIPE(S) AS SHOWN. CONTRACTOR TO SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO INSTALLATION.



**SEWER - WATER - DRAINAGE - PIPE CROSSING**

NOT TO SCALE



**TYPICAL WATER MAIN GATE VALVE**

NOT TO SCALE

| FITTING TYPE                                   | NUMBER OF 18-FT. PIPE LENGTHS REQUIRED WITH RESTRAINED JOINTS IN EACH DIRECTION: |             |              |
|--|--|-------------|--------------|
|  | 6"D.I. MAIN  | 8"D.I. MAIN | 12"D.I. MAIN |
| 90° BENDS, TEE BRANCHES, VALVES, AND DEAD ENDS | 3  | 4           | 5            |
| 45° BENDS                                      | 1  | 1           | 2            |
| 22 1/2° BENDS                                  | 1  | 1           | 1            |
| 11 1/4° BENDS                                  | 1  | 1           | 1            |

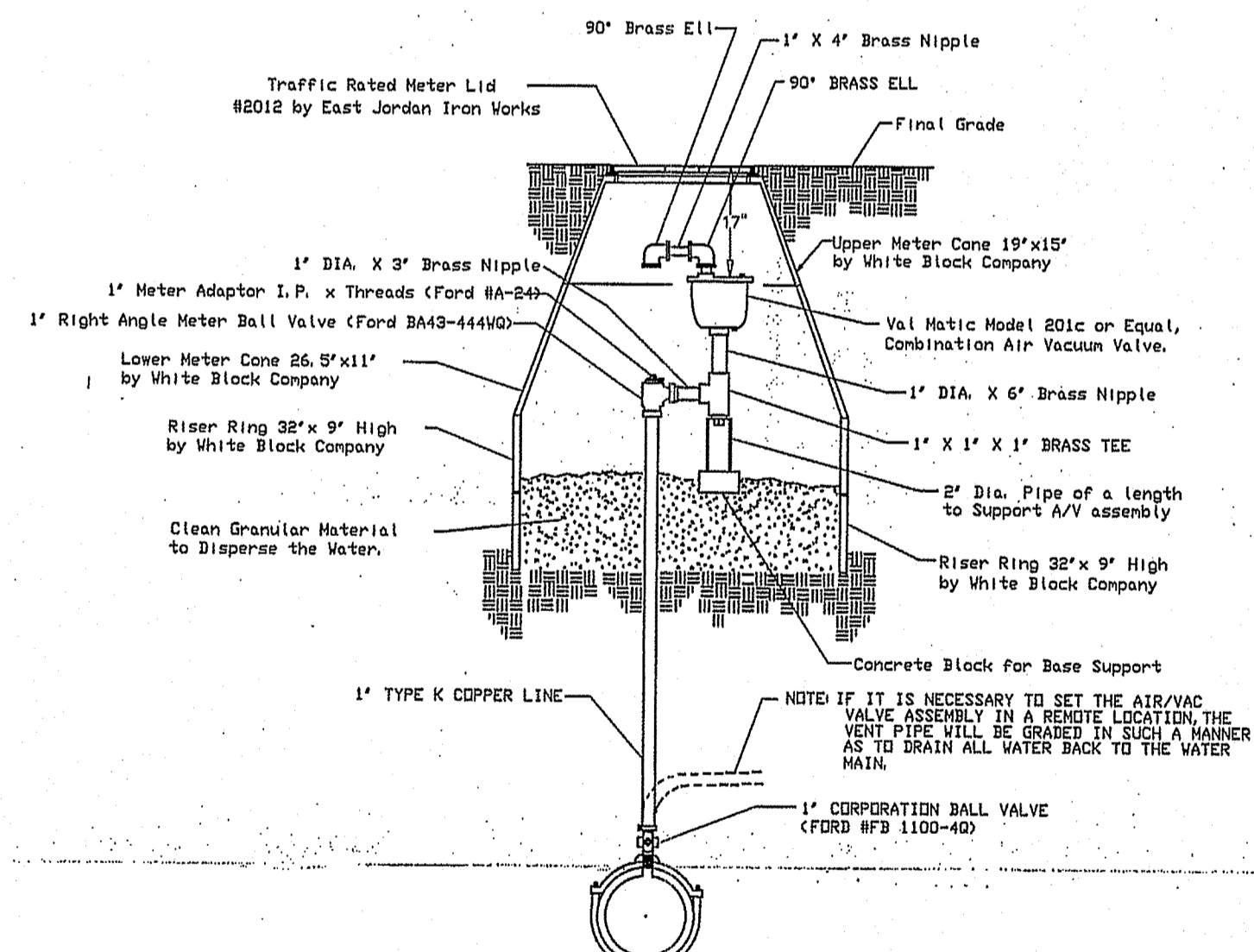
**NOTES:**

- D.I. STATIC PRESSURE = 50 P.S.I.
- D.I. TEST PRESSURE = 180 P.S.I. (200 P.S.I. USED FOR CALCS.)

TABLE WAS DEVELOPED USING E.B.B.A. IRON RESTRAINT LENGTH CALCULATOR. (VERSION 5.0.2 WITH THE FOLLOWING ASSUMPTIONS.)

- S.F. = 2.5
- SOIL TYPE = GM
- TRENCH TYPE = 5
- DEPTH = 5 FEET

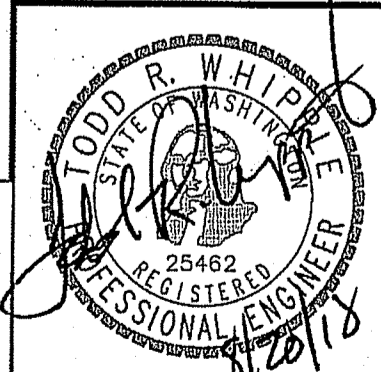
**RESTRAINED JOINT TABLE**



**AIR-VACUUM RELIEF DETAIL**

NOT TO SCALE

**UNDERGROUND SERVICE ALERT**  
ONE-CALL NUMBER  
**811**  
CALL TWO BUSINESS DAYS BEFORE YOU DIG



**PLANS NOT APPROVED BY AGENCY**

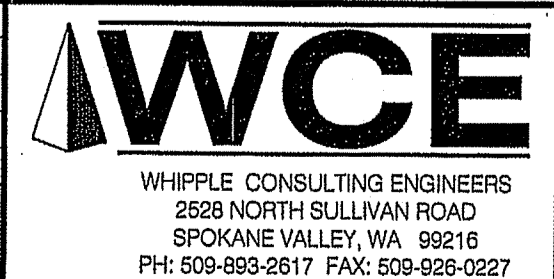
DATUM: NAVD - 88

TBM 9-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD83) = 2009.87 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
HORIZONTAL: N/A  
VERTICAL: N/A

PROJ #: 13-1166  
DATE: 08/14/18  
DRAWN: JPP  
REVIEWED: TRW



**SPOKANE VALLEY PAINTED HILLS PRD**  
**WATER NOTES & DETAILS**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C7.2**  
JOB NUMBER 13-1166

SE<sub>1</sub>/<sub>4</sub>, SEC. 33, T. 25N., R. 44E., W.M.  
 SW<sub>2</sub>, SEC. 34, T. 25N., R. 44E., W.M.  
 NE<sub>1</sub>/<sub>4</sub>, SEC. 4, T. 24N., R. 44E., W.M.

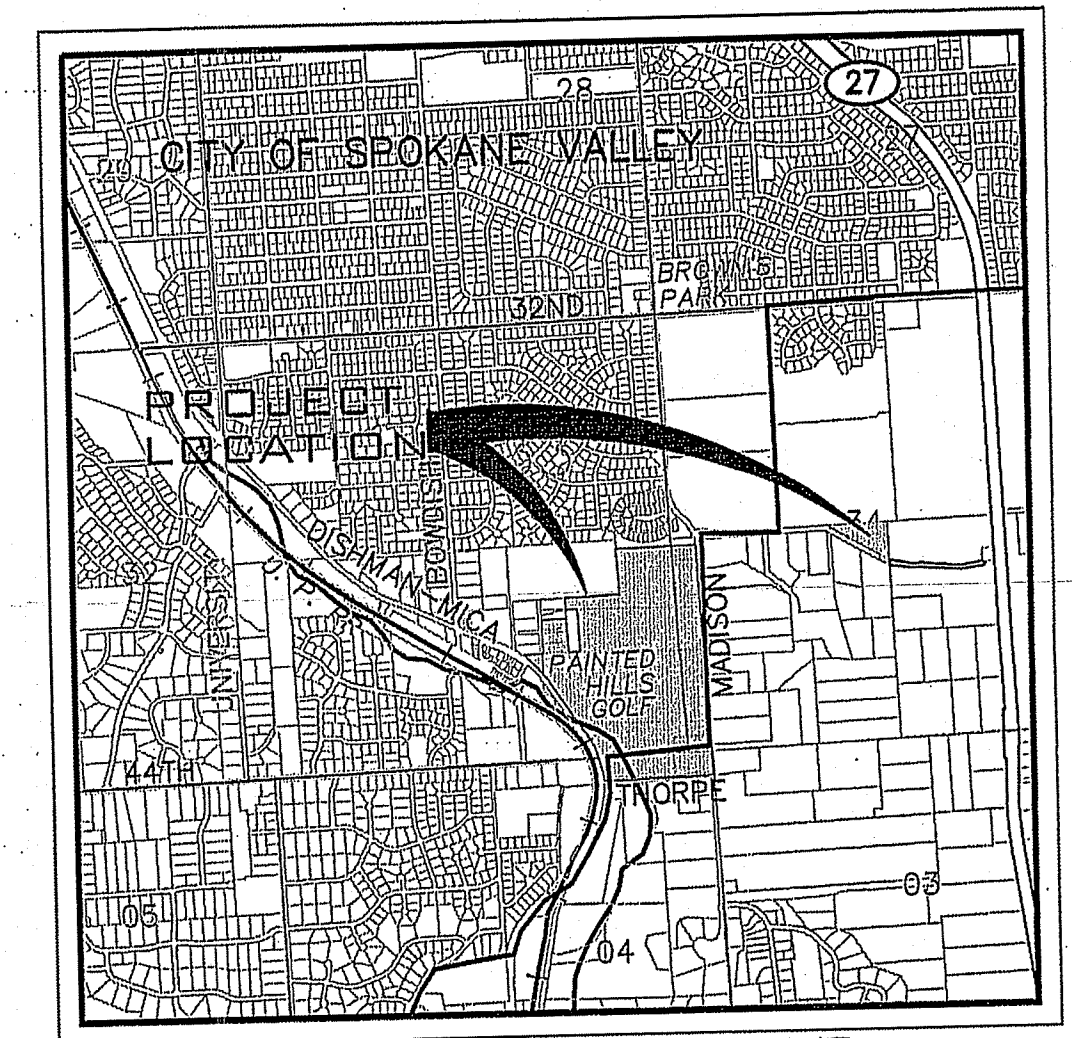
**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG

# PAINTED HILLS SEWER PLANS

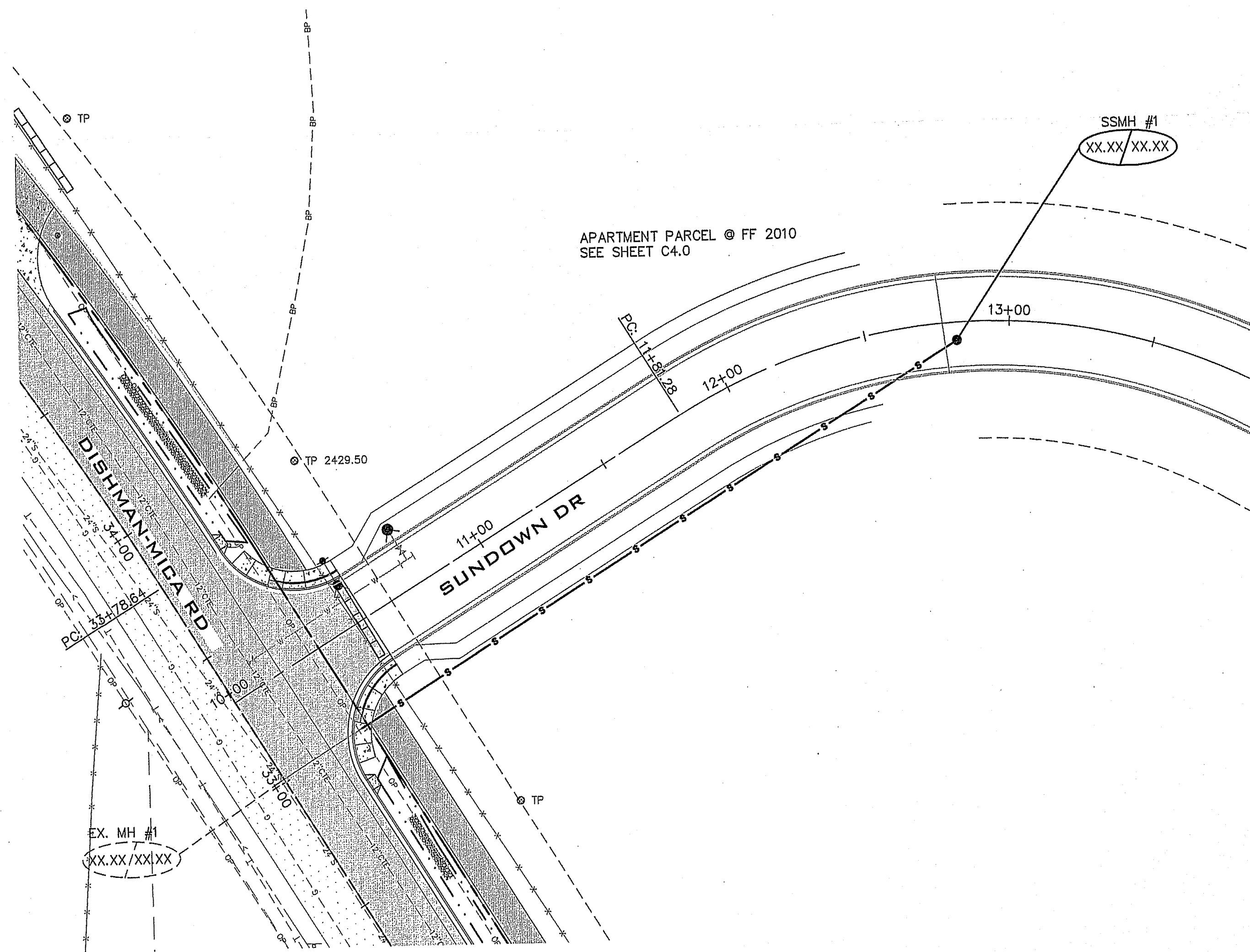
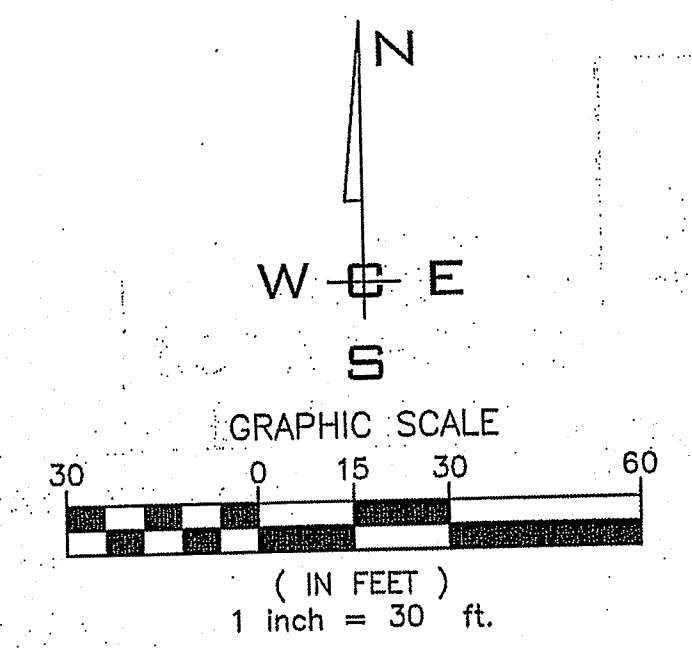
LOCATED IN A PORTION OF  
 SE<sub>1</sub>/<sub>4</sub>, SEC. 33, T. 25N., R. 44E., W.M.  
 CITY OF SPOKANE VALLEY, WA

**GENERAL NOTES**

- ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED SITE UTILITY STANDARDS AND THE STANDARDS AND SPECIFICATIONS SET FORTH IN SPOKANE COUNTY REGULATIONS AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK WITHIN PUBLIC R.O.W. OR EASEMENTS SHALL BE INSPECTED AND APPROVED BY SPOKANE COUNTY INSPECTOR. INSPECTION SERVICES AND CONSTRUCTION CERTIFICATION TO BE PROVIDED BY DESIGNEE OF PROJECT SPONSOR/OWNER.
  - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY SPOKANE COUNTY INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
  - THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH SPOKANE COUNTY AND ALL UTILITY COMPANIES WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION, TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION, AND WITH A MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.
  - THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND ONE (1) COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB ON-SITE AT ALL TIMES.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO: EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
  - IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
  - ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
  - FOR WORK AFFECTING PUBLIC ROADWAYS OR IF REQUIRED BY SPOKANE COUNTY, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL AND PHASING PLAN IN ACCORDANCE WITH M.U.T.C.D. FOR APPROVAL. PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN OR AFFECTING THE RIGHT-OF-WAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY SAID PLANS. PRIOR TO INSTALLATION, A PRECONSTRUCTION CONFERENCE SHALL BE HELD WITH SPOKANE COUNTY.
  - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED OR RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
  - PER AGENCY STANDARDS THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING RECORD INFORMATION ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE AND AVAILABLE TO SPOKANE COUNTY INSPECTORS AT ALL TIMES.
  - DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. FOR ADDITIONAL INFORMATION CONTACT THE ENGINEER FOR CLARIFICATION AND NOTE ON THE RECORD DRAWINGS.
  - ALL EROSION AND SEDIMENT CONTROL (E.S.C.) MEASURES SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION PRIOR TO GROUND DISTURBING ACTIVITY. ALL E.S.C. MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.
  - THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTORS SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN, AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.
  - ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY IS SUBJECT TO THE JURISDICTION OF SPOKANE COUNTY ENGINEERING DEPARTMENT STANDARD DETAILS AND SPECIFICATIONS.
  - ALL CONSTRUCTION OPERATIONS, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTH MOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED EQUIPMENT SHALL GENERALLY BE LIMITED TO THE TIME PERIOD APPROVED BY SPOKANE COUNTY.
- BASED ON REQUIREMENTS FROM SPOKANE COUNTY, THE ENGINEER OR HIS DESIGNEE SHALL PERFORM MATERIALS TESTING AND QUALITY CONTROL ON THE PROJECT AND SHALL SUBMIT COPIES OF DAILY REPORTS, TEST REPORTS, PROJECT CERTIFICATION AND RECORD DRAWINGS TO SPOKANE COUNTY ENGINEER.
- NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT APPROVAL OF SPOKANE COUNTY ENGINEERS AND NOTIFICATION OF THE ENGINEER OF RECORD.
  - ON-SITE GRADING SHALL BE IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND E.S.C. PLAN. ANY IMPORT OR EXPORT OF MATERIAL SHALL BE FROM A PREAPPROVED SOURCE/DESTINATION AND COORDINATED WITH SPOKANE COUNTY DEPARTMENT OF BUILDING AND PLANNING AT 509-477-3675. GRADING ON THIS SITE OR ANY OTHER SITE MUST COMPLY WITH ALL DEVELOPMENT REGULATIONS INCLUDING, BUT NOT LIMITED TO, GRADING PERMITS, S.E.P.A. REVIEW, TIMBER HARVEST PERMITS, CRITICAL AREAS, FLOOD PLAINS, DESIGNATED DRAINAGE WAYS, ETC.
  - THE CONTRACTOR IS CAUTIONED THAT IT IS THE UNDERSTANDING OF THE OWNER AND THE ENGINEER THAT SHOULD A CONFLICT OR DISCREPANCY IN THESE PLANS, SPECIFICATIONS, GENERAL NOTES OR PLANS ET AL. DETERMINED TO BE PART OF THE OVERALL PROJECT, INCLUDING BUT NOT LIMITED TO THE ARCHITECTURAL PLANS, MECHANICAL PLANS, ELECTRICAL PLANS, LANDSCAPE PLANS, GENERAL SPECIAL PROVISIONS, ETC., THAT WITHOUT WRITTEN CLARIFICATION FROM THE ENGINEER, OWNER OR OTHER PROFESSIONAL, DURING THE BIDDING PROCESS, THAT IN ALL INSTANCES THE CONTRACTOR WILL BE REQUIRED TO BID THE HIGHER STANDARD. FAILURE TO DO SO MAY RESULT IN THE HIGHER STANDARD BEING REQUIRED BY THE OWNER, ENGINEER OR OTHER PROFESSIONAL WITH NO CHANGE IN VALUE TO THE CONTRACT VIA CHANGE ORDER OR OTHER MECHANISM.
  - CONSTRUCTION OF EVERY DRYWELL, INCLUDING FABRIC AND DRAINROCK, SHALL BE OBSERVED BY THE ON-SITE INSPECTOR TO CONFIRM THAT IT MEETS THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.



LOCATION MAP



SITE PLAN

1"=30'

**ABBREVIATIONS**

|  |                                  |                                  |
|--|----------------------------------|----------------------------------|
| ACT. LEN. .... ACTUAL LENGTH             | GB ..... GRADE BREAK             | PRC ..... POINT OF REVERSE CURVE |
| BCR ..... BEGINNING OF CURVE RADIUS, FT. | FEET PER FOOT                    | PT ..... POINT OF TANGENCY       |
| RD ..... RIM ELEVATION                   |                                  |                                  |
| BDRY. .... BOUNDARY                      | HYD. .... HYDRANT                | RD ..... ROAD                    |
| CO. .... SEWER CLEANOUT                  | IN. .... INVERT ELEVATION        | RT. .... RIGHT                   |
| CSTO ..... CRUSHED SURFACE               | LN. .... LANE                    | SI ..... STREET INTERSECTION     |
| CT. .... TOP COURSE                      | LT. .... LEFT                    | SS ..... SANITARY SEWER          |
| DIA. .... DIAMETER                       | MCR ..... MANHOLE                | STA. LEN. .... STATION LENGTH    |
| ECR ..... END OF CURVE RADIUS            | MCR ..... MIDDLE OF CURVE RADIUS | TC ..... TOP OF CURB             |
| EXIST. .... EXISTING                     | PC ..... POINT OF CURVATURE      |                                  |
| G ..... GRADE                            | PET. .... PETROLEUM              |                                  |
|  | PI ..... POINT OF INTERSECTION   |                                  |

- PERMIT SPECIALIST**  
 CITY OF SPOKANE VALLEY  
 PERMIT CENTER  
 10210 E. SPRAGUE AVE  
 SPOKANE, WA 99206  
 PHONE: 720-5240
- DEV. CONST. INSP.**  
 CITY OF SPOKANE VALLEY  
 10210 E. SPRAGUE AVE  
 SPOKANE, WA 99206  
 PHONE: 599-6306  
 CONTACT: KEVIN VAN DYK
- CABLE**  
 COMCAST BROADBAND  
 1717 E BUCKEYE AVE  
 SPOKANE, WA 99207  
 PHONE: 755-4717  
 CONTACT: BRYAN RICHARDSON

- SEWER**  
 SPOKANE COUNTY  
 ENVIRONMENTAL SERVICES  
 1026 W BROADWAY AVE  
 SPOKANE, WA 99260  
 PHONE: 477-7180  
 CONTACT: CHRIS KNUDSON
- HEALTH**  
 SPOKANE REGIONAL HEALTH  
 1101 W COLLEGE AVE  
 SPOKANE, WA 99260  
 PHONE: 324-1578  
 CONTACT: PAUL SAVAGE
- SOLID WASTE**  
 WASTE MANAGEMENT  
 PHONE: 1-866-909-4558

- WATER**  
 SPOKANE COUNTY WATER DISTRICT #3  
 1225 N YARDLEY ST  
 SPOKANE, WA 99212  
 PHONE: 536-0121  
 CONTACT: TY WICK
- GAS**  
 AVISTA UTILITIES  
 1411 E MISSION AVE  
 SPOKANE, WA 99220  
 PHONE: 495-8610  
 CONTACT: MIKE TRUEX
- INSPECTION**  
 I.P.E.C.  
 P. O. BOX 1566  
 VERADALE, WA 99037  
 PHONE: 209-6262  
 CONTACT: PAUL T. NELSON, P.E.

- FIRE**  
 SPOKANE VALLEY FIRE DEPT.  
 2120 N WILBUR RD  
 SPOKANE VALLEY, WA 99206  
 PHONE: 928-1700  
 CONTACT: MIKE MAKELA
- POWER**  
 INLAND POWER & LIGHT CO.  
 10100 W HALLETT RD  
 SPOKANE, WA 99224  
 PHONE: 509-789-4291  
 CONTACT: CONNIE NELSON

- ROADWAYS**  
 CITY OF SPOKANE VALLEY  
 11707 E SPRAGUE AVE  
 SPOKANE, WA 99206  
 PHONE: 720-5008  
 CONTACT:
- TELEPHONE**  
 CENTURY LINK  
 904 N COLUMBUS ST  
 SPOKANE, WA 99202  
 PHONE: 623-0305  
 CONTACT: DEBORAH GEIST
- ENGINEERING**  
 WHIPPLE CONSULTING ENGINEERS  
 S. PINES RD  
 SPOKANE VALLEY, WA 99206  
 PHONE: 893-2617  
 CONTACT: TODD WHIPPLE, P.E.

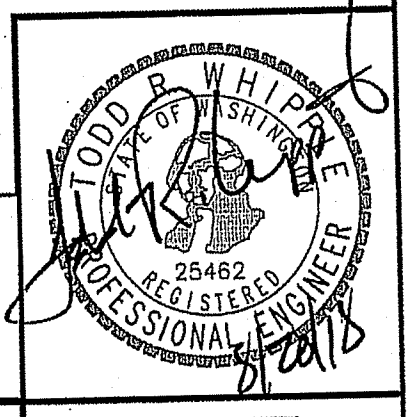
- OWNER**  
 BLACK REALTY, INC.  
 107 S HOWARD ST  
 SPOKANE, WA 99201  
 PHONE: 623-1000  
 CONTACT: BRYAN WALKER

**INDEX TO PLAN SHEETS**

- SHEET NO. C8.0 SEWER PLAN COVER
- SHEET NO. C8.1 SUNDOWN RD SEWER P&P
- SHEET NO. C8.2 SEWER NOTES & DETAILS

DEVELOPER'S APPROVAL DATE  
 "THIS CONSTRUCTION PLAN EXPIRES ONE (1) YEAR FROM DATE ON PLAN"

PLANS NOT APPROVED BY AGENCY



DATUM: NAVD - 88  
 TBM 8-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

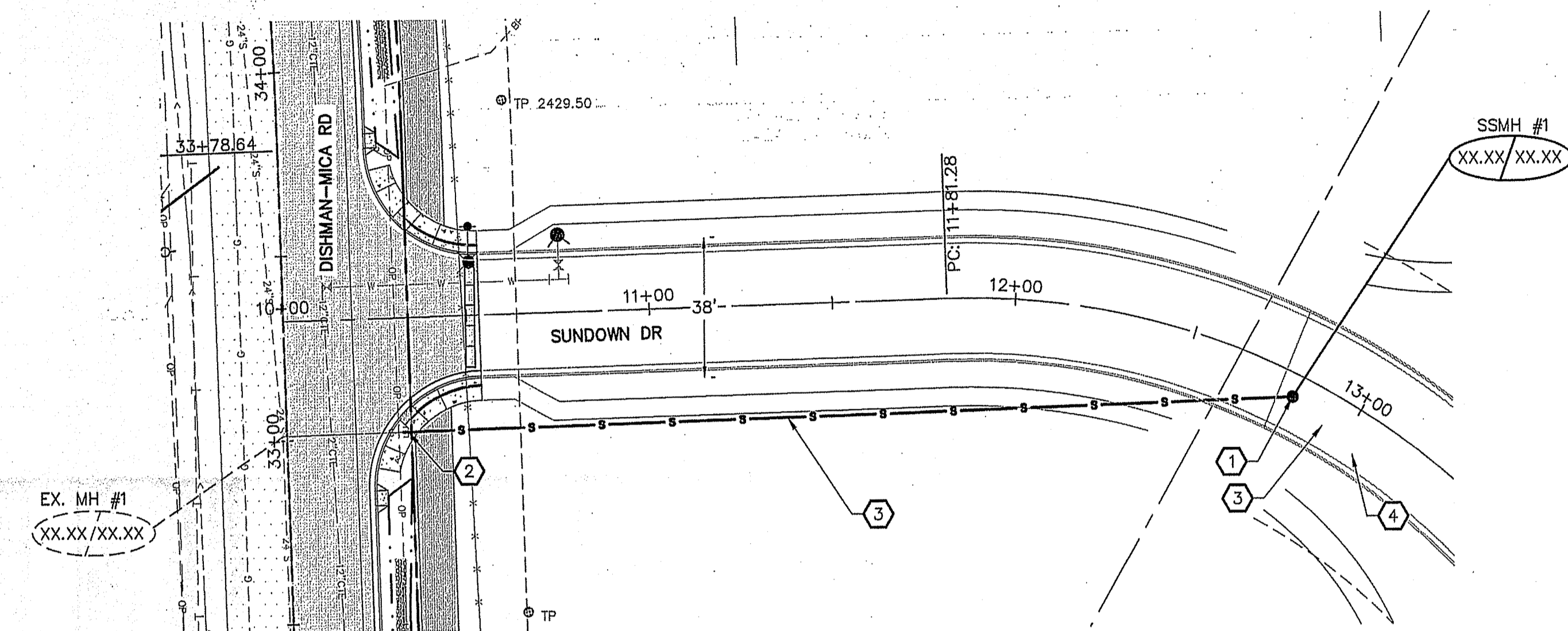
|                           |                        |
|---------------------------|------------------------|
| <b>SCALE:</b>             | <b>PROJ #:</b> 13-1166 |
| <b>HORIZONTAL:</b> 1"=30' | <b>DATE:</b> 08/14/18  |
| <b>VERTICAL:</b> N/A      | <b>DRAWN:</b> JPP      |
|                           | <b>REVIEWED:</b> TRW   |

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2528 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-899-2617 FAX: 509-899-0227

**SPOKANE VALLEY PAINTED HILLS PRD.**  
**SEWER PLAN COVER**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C8.0**  
 JOB NUMBER  
**13-1166**

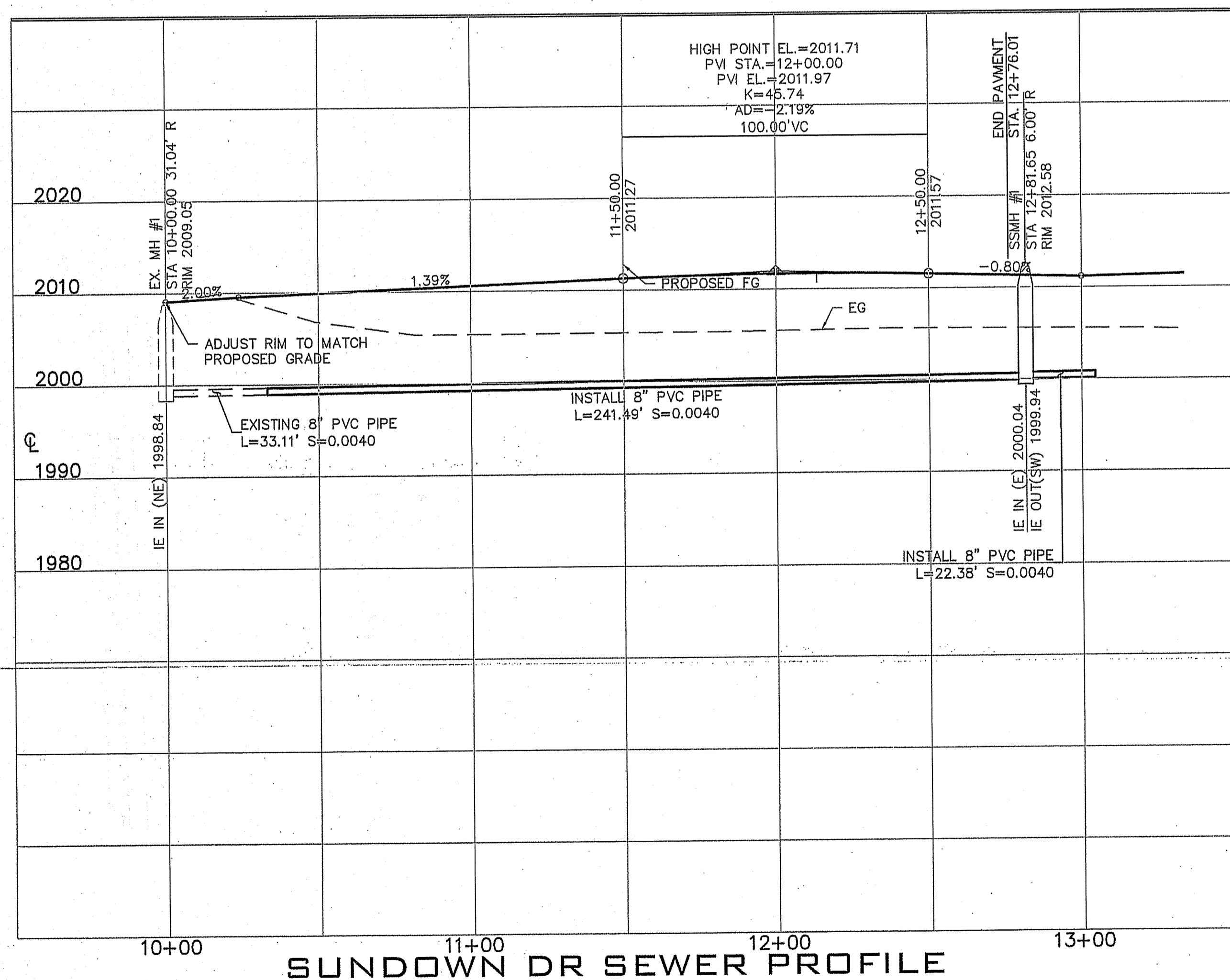
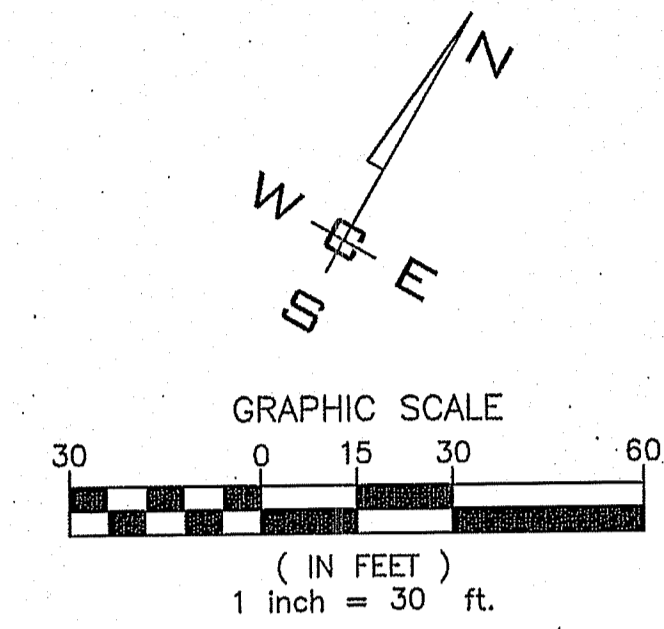
SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**CONSTRUCTION NOTES**

- 1 PROVIDE AND INSTALL 1-48-INCH SEWER MANHOLE PER SPOKANE COUNTY STANDARDS PLAN U-2. FRAME AND LID WILL BE A (3) BOLT LOCKING LID.
- 2 CONNECT TO EXISTING 8" SANITARY SEWER STUB WITH NEW 8" SDR-35 PVC PIPE. SEE PROFILE BELOW FOR INVERT INFORMATION. CONTRACTOR TO VERIFY EXACT LOCATION AND INVERT ELEVATION PRIOR TO CONSTRUCTION.
- 3 PROVIDE AND INSTALL 8" SDR-35 PVC SEWER PIPE. SEE PROFILE BELOW FOR LENGTH AND SLOPE INFORMATION.
- 4 PROVIDE AND INSTALL 8" END CAP PER SPOKANE STANDARDS AND SPECIFICATIONS.

NOTE: SEE SHEET C8.2 FOR SPOKANE COUNTY UTILITIES STANDARD NOTES FOR SMALL PROJECTS AND SEWER GENERAL NOTES.

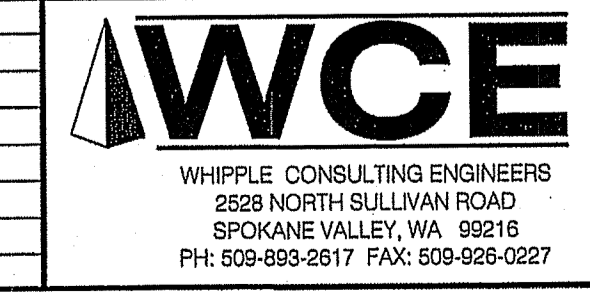


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 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
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| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

SCALE:  
 HORIZONTAL: 1"=30'  
 VERTICAL: 1"=10'

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW



**SPOKANE VALLEY PAINTED HILLS PRD  
 SUNDOWN DR SEWER P&P  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

PLANS NOT APPROVED BY AGENCY

SHEET C8.1  
 JOB NUMBER 13-1166

**SEWER GENERAL NOTES**

SEWER CONSTRUCTION, INSPECTIONS, RECORD DRAWINGS, AND ENGINEER'S STATEMENTS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE SPOKANE COUNTY POLICY ADOPTED APRIL 2002. THE DEVELOPER'S CONSTRUCTION ENGINEER SHALL SUBMIT A LETTER OF INTENT TO PROVIDE CONSTRUCTION INSPECTION AND RECORD DRAWING SERVICES PRIOR TO THE COUNTY'S ACCEPTANCE OF THESE PLANS FOR CONSTRUCTION.

1. GENERAL: ALL SEWER LINE CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS JOINTLY PROMULGATED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION, CURRENT EDITION, AS ADOPTED AND REVISED BY THE SPOKANE COUNTY UTILITIES DEPARTMENT. THESE PLANS ARE SCHEMATIC AND ARE NOT INTENDED TO DEPICT ALL DETAILS OF THE WORK REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE TO FAMILIARIZE HIMSELF WITH ACTUAL SITE CONDITIONS AND FACTORS AFFECTING THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH SPOKANE COUNTY TO DEVELOP A TRAFFIC CONTROL PLAN AND INSPECTION REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED PERMITS. PAVEMENT PATCHING REQUIREMENTS SHALL BE AS DETERMINED BY THE SPOKANE COUNTY ROAD DEPARTMENT.

2. PIPE: ALL SEWER PIPE SHALL BE PVC IN ACCORDANCE WITH A.S.T.M. D 3034, SDR 35. ALL SEWER SERVICE TEES SHALL BE A.S.T.M. D 3034 "SDR 26", TYPICAL.

3. TRENCH EXCAVATION AND BACKFILL: ALL TRENCH EXCAVATION AND BACKFILL SHALL CONFORM TO W.S.D.O.T. SECTION 7-08.3(1). ALL BEDDING SHALL CONSIST OF APPROVED BEDDING MATERIAL PLACED AROUND THE PIPE AND BACKFILLED AS PER W.S.D.O.T. SECTION 7-08.3(1)C. BEDDING SHALL MEET 9-03.12(3) SPECIFICATIONS. COMPACTION OF BACKFILL IN ROADWAY SHALL BE PERFORMED TO MEET SPOKANE COUNTY ENGINEER'S REQUIREMENTS. TESTING COLLECTOR SEWER AND SIDE SEWER SHALL BE DONE IN ACCORDANCE WITH SPOKANE COUNTY UTILITIES DEPARTMENT.

4. MANHOLES: SHALL BE IN ACCORDANCE WITH SANITARY SEWER MANHOLE DETAILS AS ADOPTED BY SPOKANE COUNTY UTILITIES DEPARTMENT.

4A. NOTE: ALL MANHOLES THAT ARE OUTSIDE OF A PAVED PUBLIC RIGHT OF WAY SHALL HAVE LOCKABLE BOLT DOWN LIDS.

4B. THE CENTER OF ALL MANHOLES SHALL BE A MINIMUM OF 4' OFF OF FACE OF CURB (TYPICAL).

5. SIDE SEWERS: EACH SEWER SERVICE LINE SHALL BE A MINIMUM OF 10 FEET FROM SIDE LOT LINES. EACH SEWER SERVICE LINE AND MAINLINE STUB SHALL BE MARKED WITH A 4"x4" MARKER POST EXTENDING VERTICALLY FROM THE SEWER SERVICE OR MAINLINE STUB INVERT TO A MINIMUM OF 24" ABOVE FINISHED GRADE. EACH 4"x4" MARKER POST SHALL HAVE A 6 GAUGE GALVANIZED WIRE SECURELY ATTACHED FOR ITS ENTIRE LENGTH AND SHALL BE CLEARLY MARKED SHOWING THE 4"x4" LENGTH IN FEET AT THE EXPOSED END.

6. INSPECTION WORK: ALL SEWER CONSTRUCTION INSPECTIONS, RECORD DRAWINGS AND ENGINEERING STATEMENTS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE SPOKANE COUNTY POLICY ADOPTED APRIL 2002. PROJECT SPONSOR OR HIS ENGINEER SHALL NOTIFY THE SPOKANE COUNTY DIVISION OF UTILITIES AT LEAST 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION OF THE SEWER SYSTEM, AND THE CONTRACTOR SHALL PROVIDE A GENERALIZED CONSTRUCTION SCHEDULE FOR THE PROGRESS OF WORK. THE CONTRACTOR SHALL COORDINATE THE WORK WITH THE ENGINEER AND PROVIDE ALL MEANS NECESSARY TO ALLOW THE ENGINEER TO INSPECT AND VERIFY THE SEWER ITEMS LISTED BELOW. FOR EACH ITEM TO BE INSPECTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS IN ADVANCE.

A. CONFORMANCE OF ALL CONSTRUCTION MATERIALS WITH COUNTY STANDARDS SHALL BE VERIFIED PRIOR TO INSTALLATION.

B. THE SEWER TRENCH SHALL BE INSPECTED FOR PROPER DIMENSIONS AND PIPE ZONE CLEARANCES PRIOR TO PLACEMENT OF PIPE.

C. THE PLACEMENT AND COMPACTION OF THE PIPE ZONE MATERIAL AND BEDDING SHALL BE INSPECTED.

D. THE PIPE JOINTS SHALL BE INSPECTED VISUALLY FOR PROPER INSERTION.

E. HORIZONTAL ALIGNMENT AND GRADE OF THE PIPE SHALL BE CHECKED FOR CONFORMANCE TO THE STANDARDS PRIOR TO BACKFILLING OF THE TRENCH.

F. SEWER SERVICE TEES AND STUBS SHALL BE INSPECTED FOR CORRECT INSTALLATION PRIOR TO BACKFILLING OF THE TRENCH.

G. ACCURATE MEASUREMENTS SHALL BE MADE AND RECORDED TO FACILITATE THE RE-ESTABLISHMENT OF SEWER SERVICE TEE LOCATIONS AND STUB END LOCATIONS. THE PLACEMENT OF THE REQUIRED STUB MARKERS SHALL BE VERIFIED.

H. MANHOLES SHALL BE INSPECTED FOR PROPER MATERIALS, LOCATION, ASSEMBLY, AND INSTALLATION.

I. TRENCH BACKFILLING OPERATIONS SHALL BE OBSERVED AND COMPACTION TESTS SHALL BE PERFORMED. MINIMUM REQUIREMENTS FOR BACKFILLING SHALL BE AS SET FORTH IN THE ACCEPTED PLANS AND/OR SPECIFICATIONS FOR THE PROJECT.

J. MANDREL TESTING, HYDROSTATIC AND/OR AIR PRESSURE TESTING, AND MANHOLE TESTING SHALL BE PERFORMED FOLLOWING COMPLETION OF TRENCH BACKFILLING OPERATIONS. THE TESTING SHALL BE OBSERVED UNTIL PASSING RESULTS ARE OBTAINED. MANHOLE TESTING SHALL BE PERFORMED ON TEN PERCENT OF THE MANHOLES IN THE PROJECT, IN ACCORDANCE WITH DEPARTMENT OF ECOLOGY'S "CRITERIA FOR SEWAGE WORKS DESIGN".

K. THE SPONSOR'S ENGINEER SHALL SCHEDULE TELEVISION INSPECTION OF THE SEWER LINES THROUGH THE DIVISION OF UTILITIES ONCE THE OTHER TESTING HAS BEEN SATISFACTORILY COMPLETED. THE DIVISION OF UTILITIES WILL THEN PERFORM THE TELEVISION INSPECTION AND POST THE VIDEO ON A COUNTY FTP SITE (FTP://FTP.SPOKANECOUNTY.ORG/SEWERUTIL) FOR ACCESS BY THE ENGINEER FOR REVIEW AND NOTATION OF ANY DEFICIENCIES REQUIRING REPAIR. THE ENGINEER WILL THEN NOTIFY THE CONTRACTOR TO INITIATE REPAIRS AND RE-INSPECTION.

L. THE ITEMS LISTED UNDER RECORD DRAWINGS (NOTE #7) SHALL BE INCLUDED IN THE INSPECTION AND TESTING WORK.

7. RECORD DRAWINGS: REPRODUCIBLE RECORD DRAWINGS WITH "ENGINEERS STATEMENT" ARE TO BE SUBMITTED TO AND APPROVED BY THE SPOKANE COUNTY UTILITIES DEPARTMENT AT THE COMPLETION OF CONSTRUCTION. 2 HORIZONTAL AND 1 VERTICAL TIE SHALL BE SHOWN ON RECORD DRAWINGS FOR ALL SIDE SEWER SERVICES. MAIN LINE STUBS AND CLEANOUTS. STUBS THAT ARE NOT CONSTRUCTED PERPENDICULAR TO SEWER MAIN WILL NEED A STATION AND OFFSET FROM SEWER MAIN TO END CAP SHOWN ON RECORD DRAWINGS. STATIONS SHALL BE FROM DOWNSTREAM MANHOLE AND MEASURED ON MAIN SEWER LINE. MINIMUM SEWER RECORD DRAWING REQUIREMENTS ARE AS FOLLOWS:

A. PIPE SIZE AND TYPE/LENGTH AND SLOPE BETWEEN MANHOLES.

B. ACTUAL RIM AND INVERT ELEVATION AT EACH MANHOLE.

C. DISTANCE FROM DOWNSTREAM MANHOLE TO SIDE SEWER SERVICE STUB ENDS. 90' TO STUB END FROM SEWER MAIN OR BACK OF CURB (NOT PROPERTY LINES).

D. ALL ANGLE POINTS OR BENDS ON SIDE SERVICE LINE SHALL BE LOCATED WITH 2 HORIZONTAL SWING TIES. STUBS NOT CONSTRUCTED PERPENDICULAR TO SEWER MAIN WILL REQUIRE A STATION ON THE SERVICE TEE ALSO SHOWN ON RECORD DRAWINGS.

E. ACTUAL INVERT ELEVATION OF STUB AND CALCULATED DEPTH FROM ADJOINING CURB OR NATURAL GROUND. THE ENGINEER SHALL COMPLETE 8 1/2"x11" COUNTY STANDARD PLAN SHEET U-16 (SIDE SERVICE CONNECTION RECORD DRAWING) FOR EACH SIDE SERVICE WITHIN PROJECT OR PLAT AND SUBMIT WITH RECORD DRAWINGS OF PLAN AND PROFILE SHEETS PRIOR TO PROJECT SIGN OFF.

F. STREET WIDTH/BACK TO BACK OF CURBS/WIDTH OF RIGHT-OF-WAY.

G. LOCATION OF SEWER MAIN WITHIN STREET. FORCE MAIN ANGLE POINTS SHALL BE LOCATED TWO WAYS HORIZONTALLY AND ONE WAY VERTICALLY FROM PERMANENT SURFACE FEATURES.

H. STUBS NOT 10' FROM THE SIDE LOT LINES MUST BE MOVED OR A MAINTENANCE EASEMENT MUST BE PROVIDED OR A HOLD COUNTY HARMLESS AGREEMENT MUST BE PROVIDED.

I. SHOW ALL SERVICED LOTS, LOT NUMBERS, BLOCK NUMBERS AND LOT LINES.

J. SHOW DIMENSIONS AND INCLUDE A COPY OF THE RECORDED EASEMENT DOCUMENT FOR ALL MAINLINE SANITARY SEWER EASEMENTS (10' MINIMUM EACH SIDE OF PIPE).

8. TESTING AND ACCEPTANCE: TESTING OF MAIN LINES, SERVICES, MANHOLES, AND APPURTENANCES SHALL CONFORM TO THE WSDOT STANDARD SPECIFICATIONS, 2004 EDITION. THE LOW PRESSURE AIR TEST METHOD AND TV INSPECTION SHALL BE PERFORMED. ALL SEWER LINES SHALL BE CLEANED PRIOR TO TV INSPECTION BY JET RODDING OR BY SLURGING.

NOTE: WHEN FLUSHING IS USED BY CONTRACTOR TO CLEAN LINES THE ENGINEER'S INSPECTION REPRESENTATIVE SHALL BE PRESENT ON-SITE TO INSURE THAT NO CONSTRUCTION MATERIAL IS FLUSHED INTO THE EXISTING COUNTY SEWER SYSTEM.

9. INSTALLATION OF SEWER SERVICE: PRIOR TO THE INSTALLATION OF SEWER SERVICES, THE CONTRACTOR SHALL COORDINATE WITH EACH RESIDENT A MINIMUM OF 48 HOURS IN ADVANCE OF THE INSTALLATION OF THEIR SERVICE. THE CONTRACTOR SHALL REMOVE AND REPLACE FENCING AND DRIVEWAYS REQUIRED TO INSTALL SEWER SERVICES. THE CONTRACTOR SHALL ALSO PROVIDE TOPSOIL AND SEED AND RESTORE DISTURBED AREAS AS A RESULT OF THIS CONSTRUCTION TO EXISTING CONDITIONS.

10. EXISTING SEWER CONNECTIONS: THE CONTRACTOR SHALL VERIFY SEWER STUB LOCATIONS WITH EXISTING HOMEOWNERS PRIOR TO CONSTRUCTION. SEWER SERVICE CONNECTIONS SHALL BE TYPE "A" UNLESS OTHERWISE SPECIFIED ON THE APPROVED PLANS. SEWER STUBS HAVE A MINIMUM SLOPE OF 2% UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.

**SPECIAL NOTES**

1. REGARDING NOTE NO. 5: PER SPOKANE COUNTY STANDARD DETAIL, U-5 A 2"x4" MARKER POST MAY BE SUBSTITUTED FOR THE 4"x4" MARKER POST REFERENCED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THIS POST THROUGHOUT THE COURSE OF CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER.

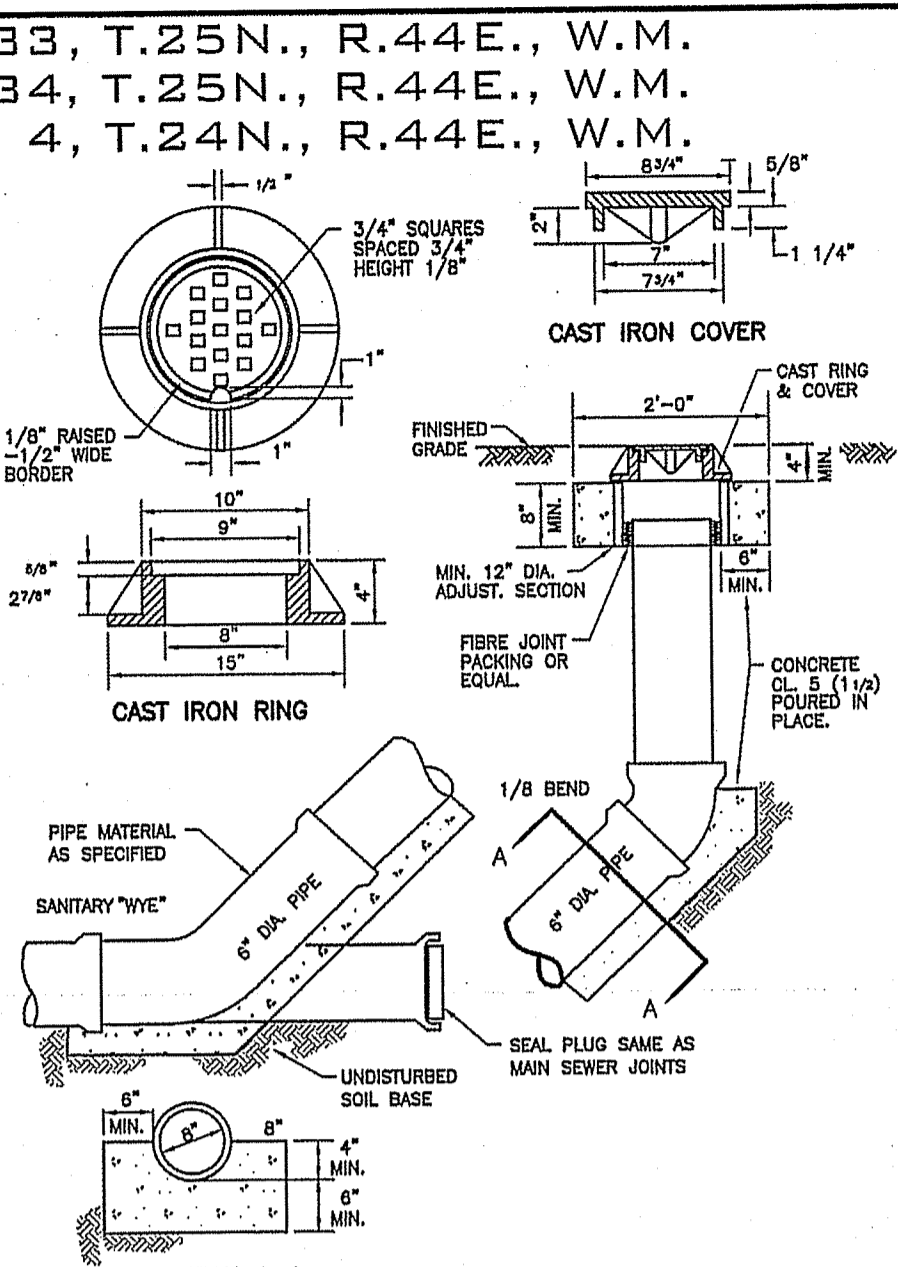
2. SEWER STUB LOCATION AND SIZE SHALL BE COORDINATED BY ENGINEER WITH HOMEOWNER PRIOR TO CONSTRUCTION. WRITTEN CORRESPONDENCE WITH HOMEOWNER IS REQUIRED AND COPIES SHALL BE SUBMITTED TO SPOKANE COUNTY FOR THE RECORD.

3. ALL PARCELS THAT ARE ADJACENT TO THIS SEWER PROJECT AND ARE LARGE ENOUGH TO BE SHORT PLATTED OR FURTHER DEVELOPED SHALL HAVE A MINIMUM OF A 6" SERVICE STUB ADDED FOR FUTURE DEVELOPMENT.

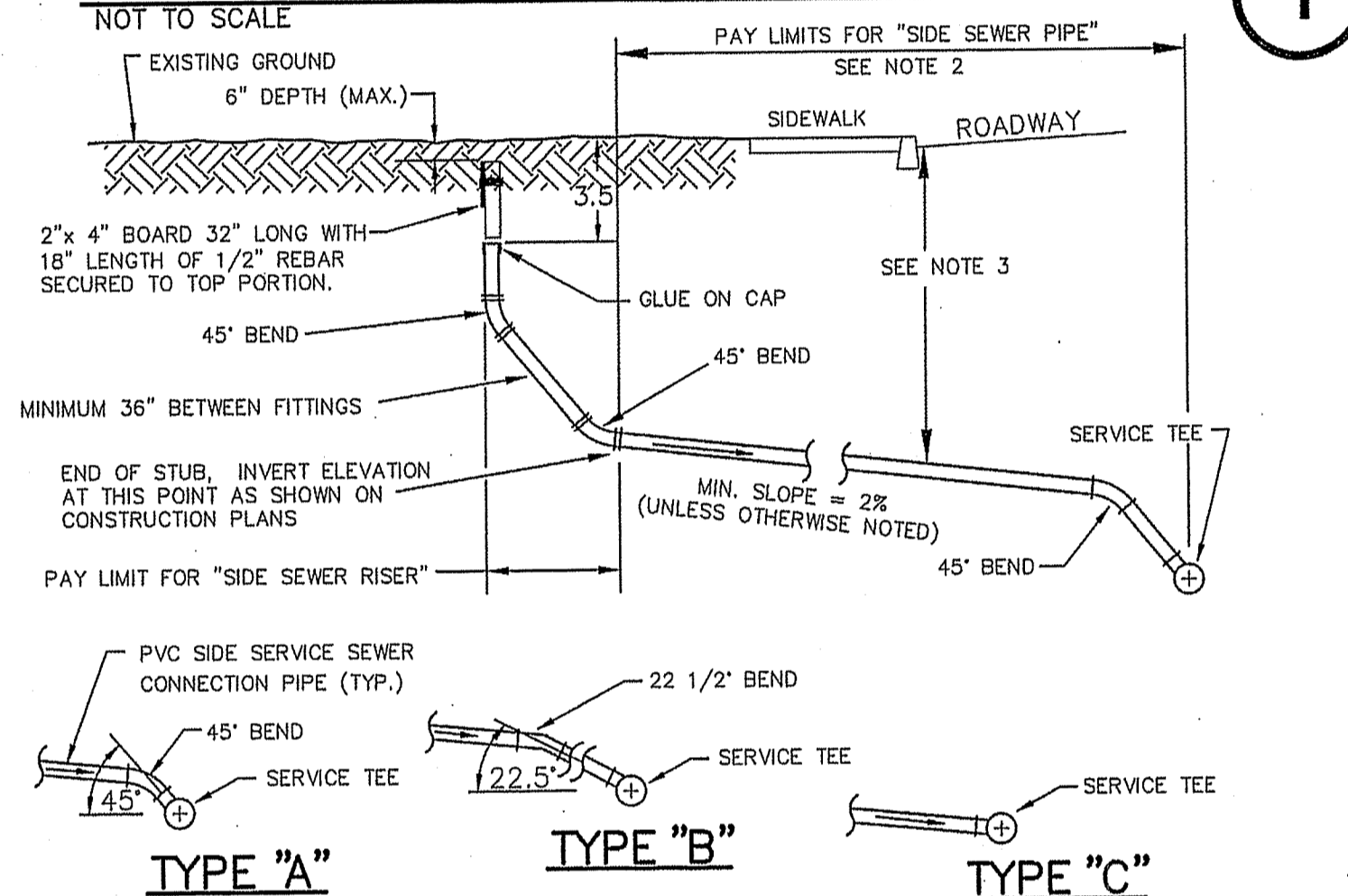
DATUM: NAVD - 88

TBM 5-5 OF THE SOUTH PONDEROSA PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

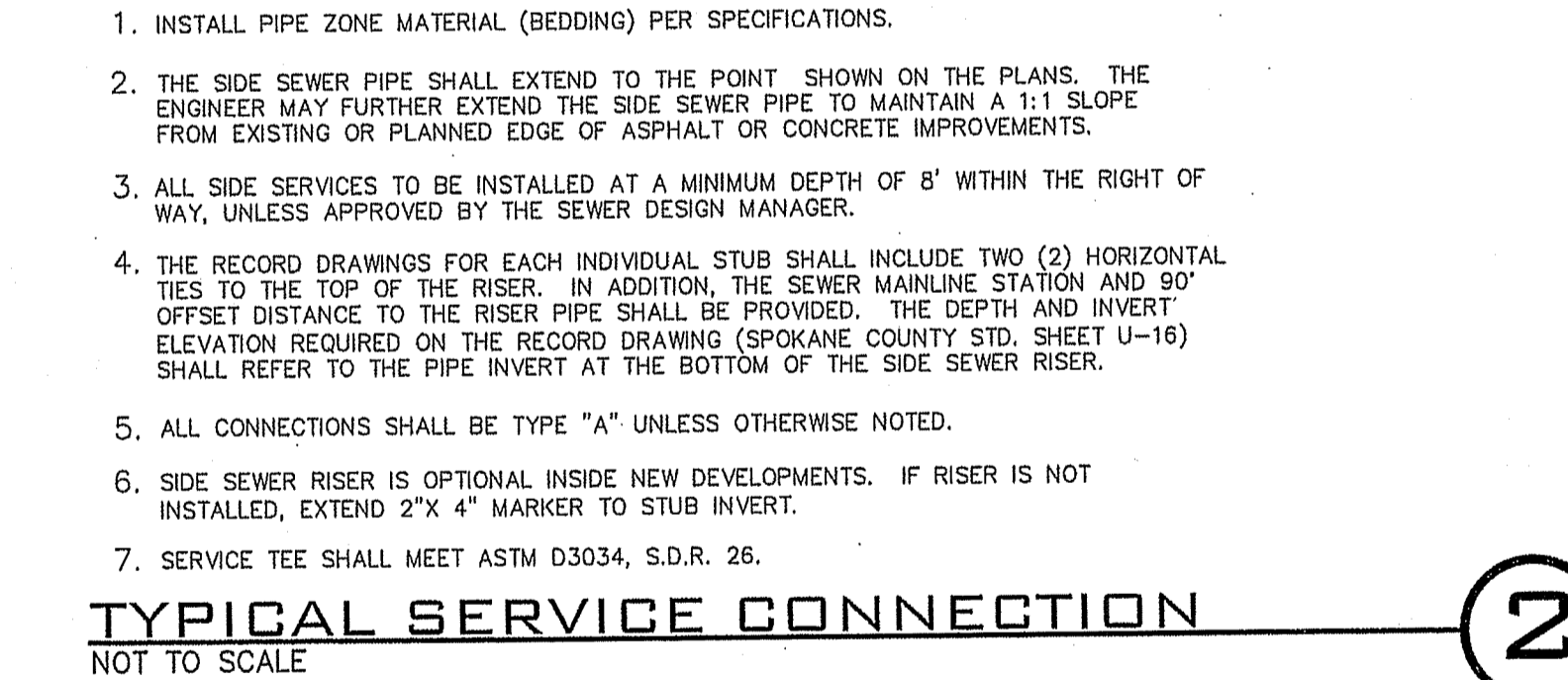
| NO. | DATE     | BY  | REVISIONS            |
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| 2   | 08-14-18 | JPP | REVISED PLANS        |
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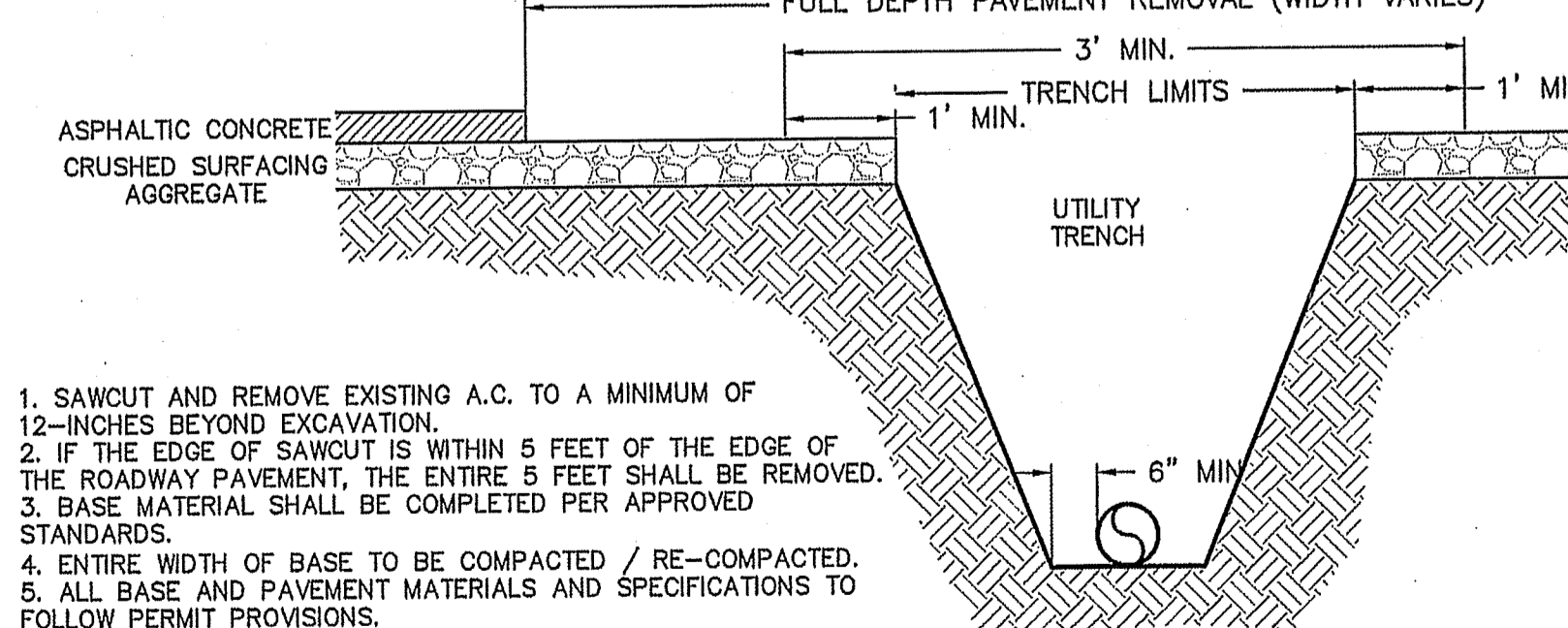
SEWER CLEANOUT 1



TYPICAL SERVICE CONNECTION 2



TYPICAL UTILITY CUT REPAIR 3



TYPICAL UTILITY TRENCH 4

**SPOKANE COUNTY UTILITIES STANDARD NOTES FOR SMALL COMMERCIAL PROJECTS**

- PER SPOKANE COUNTY SANITARY SEWER ORDINANCE 96-0752 A SET OF UTILITIES DIVISION STAMPED APPROVED PLANS MUST BE ON THE JOB SITE AND READILY ACCESSIBLE TO THE INSPECTOR.
- IF PROJECT INCLUDES SEWER TAP INTO AN EXISTING COUNTY OPERATED SEWER MAIN, PERMIT AND INSPECTION IS REQUIRED AND COUNTY INSPECTOR TO BE ON-SITE AT TIME OF TAP. CALL ONE WORKING DAY IN ADVANCE TO SCHEDULE INSPECTIONS, 477-3604.
- SEWER PERMIT REQUIRED FOR EACH BUILDING CONNECTION TO SEWER ON PROJECT SITE. ALL ON-SITE SEWER INSTALLATIONS MUST BE INSPECTED. CALL ONE WORKING DAY IN ADVANCE TO SCHEDULE INSPECTIONS, 477-3604.
- ALL SANITARY SEWER PIPE ON-SITE MAY BE REQUIRED TO BE CLEANED, MANDRELED, AND AIR OR WATER TESTED FOR LEAKAGE AT THE INSPECTOR'S REQUEST.
- ALL CLEANOUTS SHALL BE INSTALLED AT A MAXIMUM 90' INTERVALS INCLUDING DISTANCE TO SEWER MAIN IN STREET AND CLEANOUT RISER HEIGHT. ALSO, AT ANY CHANGE IN DIRECTION OF 90 DEGREES OR GREATER AND SHALL BE PLACED IN COUNTY APPROVED COVERS OR CASTINGS.
- ANY EXISTING SEPTIC TANKS ON-SITE SHALL BE ABANDONED AND INSPECTED PER SPOKANE COUNTY HEALTH DISTRICT AND SPOKANE COUNTY UTILITIES DIVISION REGULATIONS. CALL ONE WORKING DAY IN ADVANCE TO SCHEDULE TANK INSPECTIONS, 477-3604.
- ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE CURRENT SPOKANE COUNTY UTILITIES DIVISION STANDARDS.
- THE OWNER/DEVELOPER HEREBY AGREES TO SUBMIT ACCEPTABLE REPRODUCIBLE AS-BUILT DRAWINGS PREPARED BY AN ENGINEER FOR THE PROJECT WITHIN A 30 DAY PERIOD FOLLOWING SEWER CONSTRUCTION COMPLETION.

UNDERGROUND SERVICE ALERT  
ONE-CALL NUMBER  
**811**  
CALL TWO BUSINESS DAYS BEFORE YOU DIG

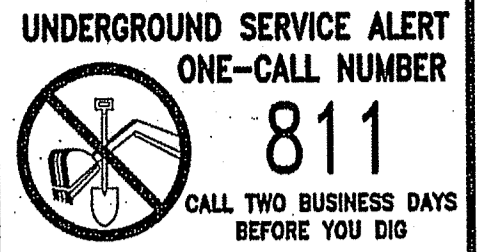
**WCE**  
WHIPPLE CONSULTING ENGINEERS  
2526 NORTH SULLIVAN ROAD  
SPOKANE VALLEY, WA 99216  
PH: 509-893-2817 FAX: 509-826-0227

**SPOKANE VALLEY PAINTED HILLS PRD  
SEWER DETAILS  
DISHMAN-MICA RD.  
SPOKANE VALLEY, WA**

PLANS NOT APPROVED BY AGENCY

SHEET **C8.2**  
JOB NUMBER **13-1166**

SE 1/4, SEC. 33, T. 25 N., R. 44 E., W.M.  
 SW 1/4, SEC. 34, T. 25 N., R. 44 E., W.M.  
 NE 1/4, SEC. 4, T. 24 N., R. 44 E., W.M.



**GENERAL NOTES**

1. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED SITE WORK STANDARDS AND THE STANDARDS AND SPECIFICATIONS SET FORTH IN CITY OF SPOKANE VALLEY REGULATIONS AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK WITHIN PUBLIC R.O.W. OR EASEMENTS SHALL BE INSPECTED AND APPROVED BY CITY OF SPOKANE VALLEY INSPECTOR. INSPECTION SERVICES AND CONSTRUCTION CERTIFICATION TO BE PROVIDED BY DESIGNEE OF PROJECT SPONSOR/OWNER.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY CITY OF SPOKANE VALLEY INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH CITY OF SPOKANE VALLEY AND ALL UTILITY COMPANIES WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION, TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION, AND WITH A MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.
5. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND ONE (1) COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB ON-SITE AT ALL TIMES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO: EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
7. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
8. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
9. FOR WORK AFFECTING PUBLIC ROADWAYS OR IF REQUIRED BY CITY OF SPOKANE VALLEY, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL AND PHASING PLAN IN ACCORDANCE WITH M.U.T.C.D. FOR APPROVAL. PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN OR AFFECTING THE RIGHT-OF-WAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY SAID PLANS. PRIOR TO INSTALLATION, A RECONSTRUCTION CONFERENCE SHALL BE HELD WITH CITY OF SPOKANE VALLEY.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED OR RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
11. PER AGENCY STANDARDS THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING RECORD INFORMATION ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE AND AVAILABLE TO CITY OF SPOKANE VALLEY INSPECTOR AT ALL TIMES.
13. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. FOR ADDITIONAL INFORMATION CONTACT THE ENGINEER FOR CLARIFICATION AND NOTE ON THE RECORD DRAWINGS.
14. ALL EROSION AND SEDIMENT CONTROL (E.S.C.) MEASURES SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION PRIOR TO GROUND DISTURBING ACTIVITY. ALL E.S.C. MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.
15. THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTORS SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN, AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.
16. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY IS SUBJECT TO THE JURISDICTION OF CITY OF SPOKANE VALLEY ENGINEERING DEPARTMENTS' STANDARD DETAILS AND SPECIFICATIONS.
17. ALL CONSTRUCTION OPERATIONS, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTH MOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED EQUIPMENT SHALL GENERALLY BE LIMITED TO THE TIME PERIOD APPROVED BY CITY OF SPOKANE VALLEY.
18. BASED ON REQUIREMENTS FROM CITY OF SPOKANE VALLEY, THE ENGINEER OR HIS DESIGNEE SHALL PERFORM MATERIALS TESTING AND QUALITY CONTROL ON THE PROJECT AND SHALL SUBMIT COPIES OF DAILY REPORTS, TEST REPORTS, PROJECT CERTIFICATION AND RECORD DRAWINGS TO THE CITY OF SPOKANE VALLEY ENGINEER.
19. NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT APPROVAL OF CITY OF SPOKANE VALLEY ENGINEERS AND NOTIFICATION OF THE ENGINEER OF RECORD.
20. ON-SITE GRADING SHALL BE IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND E.S.C. PLAN. ANY IMPORT OR EXPORT OF MATERIAL SHALL BE FROM AN APPROVED SOURCE/DESTINATION AND COORDINATED WITH CITY OF SPOKANE VALLEY COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT 509-921-1000/SPOKANE COUNTY DEPARTMENT OF BUILDING AND PLANNING 509-477-3675. GRADING ON THIS SITE OR ANY OTHER SITE MUST COMPLY WITH ALL DEVELOPMENT REGULATIONS INCLUDING, BUT NOT LIMITED TO, GRADING PERMITS, S.E.P.A. REVIEW, TIMBER HARVEST PERMITS, CRITICAL AREAS, FLOOD PLAINS, DESIGNATED DRAINAGE WAYS, ETC.
21. THE CONTRACTOR IS CAUTIONED THAT IT IS THE UNDERSTANDING OF THE OWNER AND THE ENGINEER THAT SHOULD A CONFLICT OR DISCREPANCY IN THESE PLANS, SPECIFICATIONS, GENERAL NOTES OR PLANS ETAL, DETERMINED TO BE PART OF THE OVERALL PROJECT, INCLUDING BUT NOT LIMITED TO THE ARCHITECTURAL PLANS, MECHANICAL PLANS, ELECTRICAL PLANS, LANDSCAPE PLANS, GENERAL SPECIAL PROVISIONS, ETC. THAT WITHOUT WRITTEN CLARIFICATION FROM THE ENGINEER, OWNER OR OTHER PROFESSIONAL, DURING THE BIDDING PROCESS, THAT IN ALL INSTANCES THE CONTRACTOR WILL BE REQUIRED TO BID THE HIGHER STANDARD. FAILURE TO DO SO MAY RESULT IN THE HIGHER STANDARD BEING REQUIRED BY THE OWNER, ENGINEER OR OTHER PROFESSIONAL WITH NO CHANGE IN VALUE TO THE CONTRACT VIA CHANGE ORDER OR OTHER MECHANISM.
22. CONSTRUCTION OF EVERY DRYWELL, INCLUDING FABRIC AND DRAINROCK, SHALL BE OBSERVED BY THE ON-SITE INSPECTOR TO CONFIRM THAT IT MEETS THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.

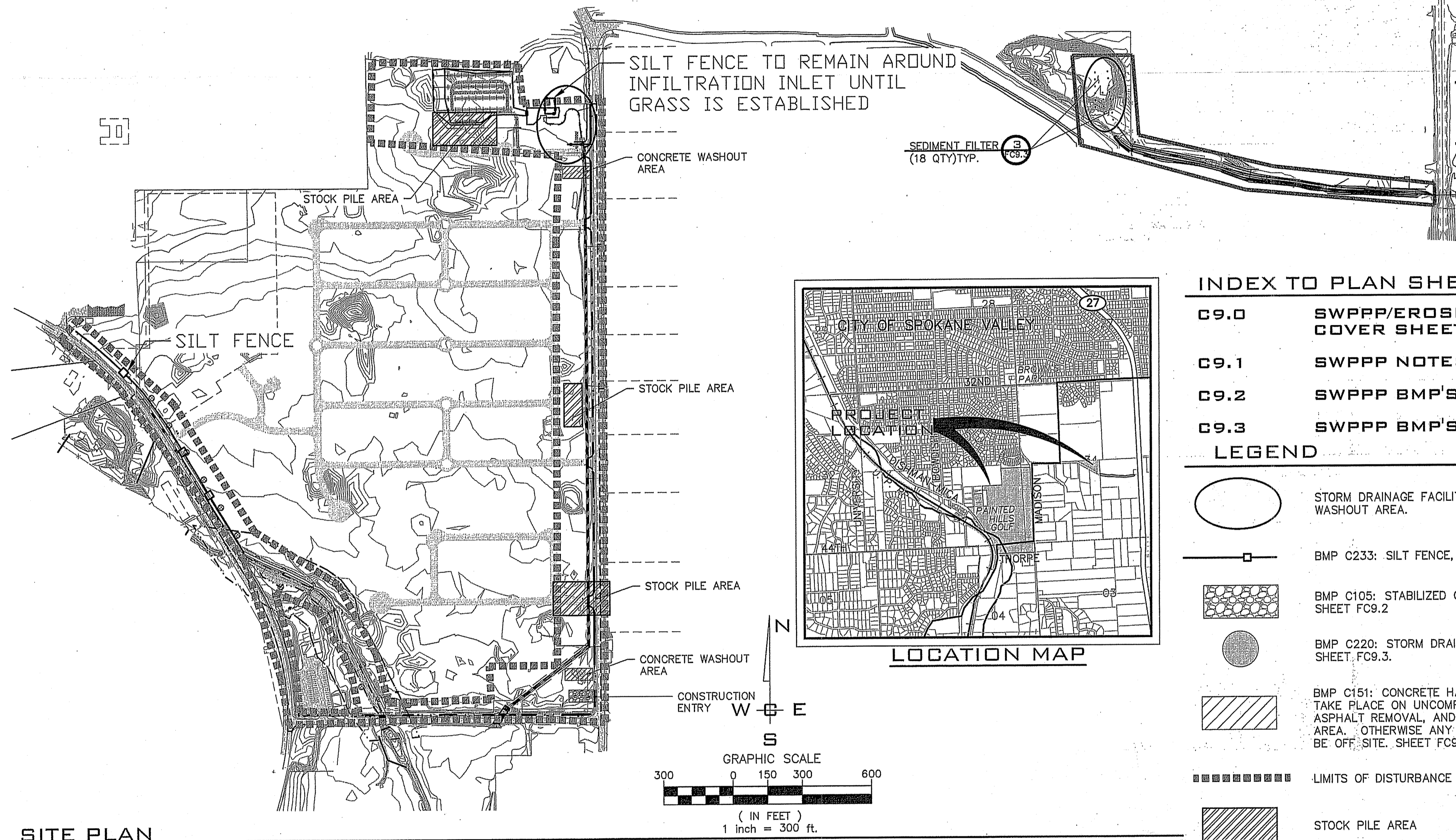
# SWPPP/EROSION CONTROL PLAN

## PAINTED HILLS PRD

### DISHMAN-MICA ROAD & THORPE ROAD

#### SPOKANE VALLEY, WASHINGTON

##### SE, 1/4 OF S. 33, T. 25 N., R. 44 E., W.M.



**INDEX TO PLAN SHEETS**

|      |                                   |
|------|-----------------------------------|
| C9.0 | SWPPP/EROSION CONTROL COVER SHEET |
| C9.1 | SWPPP NOTES                       |
| C9.2 | SWPPP BMP'S                       |
| C9.3 | SWPPP BMP'S                       |

**LEGEND**

|  |  |
|--|--|
|  | STORM DRAINAGE FACILITY - NO CONCRETE TRUCK WASHOUT AREA.  |
|  | BMP C233: SILT FENCE, SHEET FC9.2.   |
|  | BMP C105: STABILIZED CONSTRUCTION ENTRY, SHEET FC9.2   |
|  | BMP C220: STORM DRAIN INLET PROTECTION, SHEET FC9.3.   |
|  | BMP C151: CONCRETE HANDLING - MAY ONLY TAKE PLACE ON UNCOMPACTED SUBGRADE AFTER ASPHALT REMOVAL, AND IN A NON-LANDSCAPED AREA. OTHERWISE ANY CONCRETE WASHOUT MUST BE OFF-SITE. SHEET FC9.3. |
|  | LIMITS OF DISTURBANCE  |
|  | STOCK PILE AREA  |

**SITE PLAN**  
 SCALE: 1" = 300'

- |  |  |  |   |   |   |
|--|--|--|---|---|---|
| <p><b>PERMIT SPECIALIST</b><br/>         CITY OF SPOKANE VALLEY PERMIT CENTER<br/>         10210 E SPRAGUE AVE<br/>         SPOKANE, WA 99206<br/>         PHONE: 720-5240</p> <p><b>DEV. CONST. INSP.</b><br/>         CITY OF SPOKANE VALLEY<br/>         10210 E SPRAGUE AVE<br/>         SPOKANE, WA 99206<br/>         PHONE: 599-6306<br/>         CONTACT: KEVIN VAN DYK</p> <p><b>SOLID WASTE</b><br/>         WASTE MANAGEMENT<br/>         PHONE: 1-866-909-4458</p> | <p><b>SEWER</b><br/>         SPOKANE COUNTY ENVIRONMENTAL SERVICES<br/>         1026 W BROADWAY AVE<br/>         SPOKANE, WA 99260<br/>         PHONE: 477-7180<br/>         CONTACT: CHRIS KNUDSON</p> <p><b>HEALTH</b><br/>         SPOKANE REGIONAL HEALTH<br/>         1101 W COLLEGE AVE<br/>         SPOKANE, WA 99260<br/>         PHONE: 324-1578<br/>         CONTACT: PAUL SAVAGE</p> <p><b>INSPECTION</b><br/>         I.P.E.C.<br/>         P. O. BOX 1566<br/>         VERADALE, WA 99037<br/>         PHONE: 209-6262<br/>         CONTACT: PAUL T. NELSON, P.E.</p> | <p><b>WATER</b><br/>         SPOKANE COUNTY WATER DISTRICT #3<br/>         1225 N YARDLEY ST<br/>         SPOKANE, WA 99212<br/>         PHONE: 536-0121<br/>         CONTACT: TY WICK</p> <p><b>GAS</b><br/>         AVISTA UTILITIES<br/>         1411 E MISSION AVE<br/>         SPOKANE, WA 99220<br/>         PHONE: 495-8610<br/>         CONTACT: MIKE TRUEX</p> <p><b>SURVEYOR</b><br/>         WHIPPLE CONSULTING ENGINEERS<br/>         21 S. PINES RD<br/>         SPOKANE VALLEY, WA 99206<br/>         PHONE: 893-2617<br/>         CONTACT: JON GORDON, P.L.S.</p> | <p><b>FIRE</b><br/>         SPOKANE VALLEY FIRE DEPT.<br/>         2120 N WILBUR RD<br/>         SPOKANE, WA 99206<br/>         PHONE: 928-1700<br/>         CONTACT: MIKE MAKELA</p> <p><b>TELEPHONE</b><br/>         CENTURY LINK<br/>         904 N COLUMBUS ST<br/>         SPOKANE, WA 99202<br/>         PHONE: 623-0305<br/>         CONTACT: DEBORAH GEIST</p> <p><b>ENGINEERING</b><br/>         WHIPPLE CONSULTING ENGINEERS<br/>         21 S. PINES RD,<br/>         SPOKANE VALLEY, WA 99206<br/>         PHONE: 893-2617<br/>         CONTACT: TODD WHIPPLE, P.E.</p> | <p><b>POWER</b><br/>         INLAND POWER &amp; LIGHT OPERATIONS DEPARTMENT<br/>         P.O. BOX A<br/>         SPOKANE, WASHINGTON 99219<br/>         PHONE: 789-4291<br/>         CONTACT: CONNIE NELSON</p> <p><b>CABLE</b><br/>         COMCAST BROADBAND<br/>         1717 E BUCKEYE AVE<br/>         SPOKANE, WA 99207<br/>         PHONE: 755-4717<br/>         CONTACT: BRYAN RICHARDSON</p> <p><b>OWNER</b><br/>         BLACK REALTY, INC.<br/>         107 S HOWARD ST<br/>         SPOKANE, WA 99201<br/>         PHONE: 625-1000<br/>         CONTACT: BRYAN WALKER</p> | <p><b>ROADWAYS</b><br/>         CITY OF SPOKANE VALLEY<br/>         11707 E SPRAGUE AVE<br/>         SPOKANE, WA 99206<br/>         PHONE: 720-5008<br/>         CONTACT:</p> |
|--|--|--|---|---|---|

**PLANS NOT APPROVED BY AGENCY**

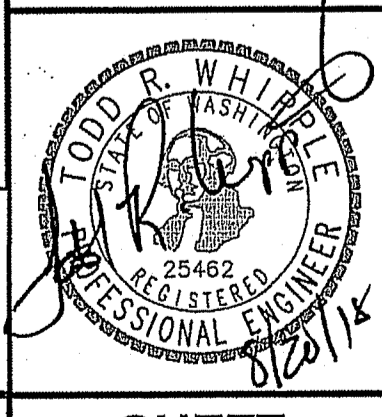
City of Spokane Valley Project/Permit No.:

SUB-2016-0001 (Subdivision)  
 FPD-2016-0007 (Flood Plain Development)  
 EGR-2016-0066 (Engineered Grading)

City of Spokane Valley Development Engineering

Relieved: \_\_\_\_\_  
 New Street Mts - Public: \_\_\_\_\_

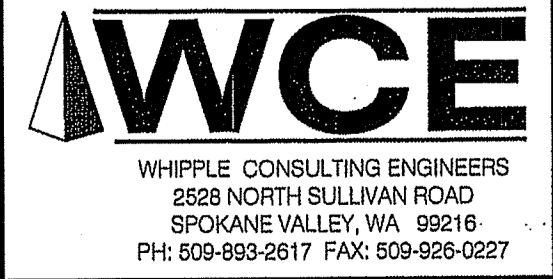
Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



⊕ DATUM: NAVD - 88  
 TBM S-6 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.87 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

|               |           |     |                      |
|---------------|-----------|-----|----------------------|
| <b>SCALE:</b> |           |     |                      |
| HORIZONTAL:   | 1" = 300' |     |                      |
| VERTICAL:     | N/A       |     |                      |
| NO.           | DATE      | BY  | REVISIONS            |
| 2             | 08-14-18  | JPP | REVISED PLANS        |
| 1             | 08-12-16  | JPP | ORIGINAL PREPARATION |

|           |          |
|-----------|----------|
| PROJ #:   | 13-1166  |
| DATE:     | 08/14/18 |
| DRAWN:    | RMA      |
| REVIEWED: | TRW      |

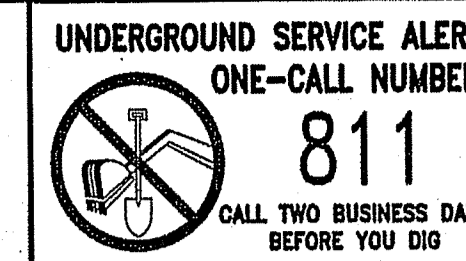


**SPOKANE VALLEY PAINTED HILLS PRD**  
**SWPPP COVER**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

|              |                |
|--------------|----------------|
| <b>SHEET</b> | <b>C9.0</b>    |
| JOB NUMBER   | <b>13-1166</b> |



SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**EROSION & SEDIMENT CONTROL**

**GENERAL NOTES AND INFORMATION**

- AN EROSION/SEDIMENT CONTROL (E.S.C.) PLAN IS REQUIRED FOR THIS PROJECT. IMPLEMENTATION OF THE E.S.C. PLAN, AND CONSTRUCTION, MAINTENANCE AND UPGRADING OF THE E.S.C. FACILITIES ARE THE RESPONSIBILITY OF THE DEVELOPER UNTIL ALL CONSTRUCTION IS COMPLETED AND ACCEPTED BY THE CITY OF SPOKANE VALLEY, OR UNTIL VEGETATION IS ESTABLISHED THROUGHOUT THE SITE, AND ACCEPTED BY THE CITY OF SPOKANE VALLEY, WHICHEVER IS LATER.
- APPROVAL OF THE E.S.C. PLAN DOES NOT CONSTITUTE APPROVAL OF ANY OF THE PROPOSED ROAD, STORM DRAINAGE, GRADING OR UTILITY DESIGN ELEMENTS SHOWN ON THE E.S.C. PLAN.
- THE EROSION/SEDIMENT CONTROL MEASURES SHOWN ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. THE CONTRACTOR SHALL INSPECT AND MAINTAIN THESE E.S.C. MEASURES DAILY, AND SHALL MAINTAIN AND UPGRADE THESE MEASURES AS NECESSARY TO PREVENT SEDIMENT-LADEN WATER FROM EITHER FLOWING OFF SITE, OR INTO NEW/EXISTING STORM DRAINAGE FACILITIES, SUCH AS DRYWELLS, CULVERTS, OR GRAVEL GALLERIES.
- GEOTEXTILE FABRIC IS TO BE PLACED ON THE RIMS, CATCH BASINS AND INLETS UNTIL SUCH TIME THAT THE VEGETATION ON THE SITE IS ESTABLISHED AND THE THREAT OF SEDIMENT DEPOSITION INTO THE DRAINAGE SYSTEM IS MITIGATED.
- THE SILT FENCES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO OTHER SITE WORK, AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. AS WORK PROGRESSES, ADDITIONAL SILT FENCE MAY BE REQUIRED TO PROTECT STREAM AREAS AND PREVENT SEDIMENT FROM GOING OFFSITE.
- THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ROCK CONSTRUCTION ENTRIES AT ANY AND ALL LOCATIONS USED TO ENTER OR EXIT THE PROJECT SITE. SEE DETAIL.
- THE CONTRACTOR IS RESPONSIBLE FOR DESIGNATING A LOCATION WHERE CONCRETE TRUCKS AND EQUIPMENT CAN BE WASHED OUT, NOT LOCATED NEAR OR DRAINING INTO A STORM DRAINAGE AREA.
- PROPERTY OWNER: BLACK REALTY, INC. - BRYAN WALKER  
 PERMIT APPLICANT: WHIPPLE CONSULTING ENGINEERS, INC. 509-893-2617  
 CONTACT PERSON ON SITE: TBD
- PROJECT LOCATION: DISHMAN-MICA ROAD & THORPE ROAD, IN SPOKANE COUNTY, WASHINGTON, IN SECTION 33, TOWNSHIP 25 N., RANGE 44 E. W.M.
- PROJECT DESCRIPTION: DEVELOPMENT OF 99.7 ACRES +/- INTO COTTAGE, SINGLE FAMILY, ESTATE, APARTMENT, AND COMMERCIAL LOTS OF AN EXISTING VACANT GOLF COURSE.
- DESCRIPTION OF E.S.C. MEASURES: USE OF SILT FENCES AND SEDIMENTATION FILTERS. ALL E.S.C. MEASURES MENTIONED ABOVE ARE TEMPORARY AND WILL BE REMOVED AFTER SITE IS LANDSCAPED.
- EXISTING VEGETATION: VACANT LAND WITH GRASS AND WEED COVER.
- PLAN PREPARATION DATE: SEPTEMBER - 2016
- SOILS: ALLUVIAL LEAN CLAY, SILT, OR SILTY SAND.
- STABILIZATION OF DENUDED AREAS:**  
 ANY DISTURBED AREAS, WHICH WOULD BE LEFT BARE FOR MORE THAN 7 DAYS AND ARE NOT INTENDED TO BE REWORKED WITHIN 30-45 DAYS SHALL BE SEEDED WITH A FAST STARTING NATIVE DRYLAND GRASS SUCH AS ANNUAL RYE, OR APPROVED EQUAL, AT A RATE OF 60 lbs/ACRE.
- CONTROL OF POLLUTANTS:**  
 ANY SPILLS WILL BE HANDLED ACCORDING TO D.O.E. AND D.O.H. GUIDELINES.
- LIMITS OF GRADING:**  
 DURING THE COURSE OF CONSTRUCTION, THE AMOUNT OF DISTURBED AREA SHALL BE KEPT TO A MINIMUM AND SHALL BE LIMITED TO THE AREA SHOWN AS "LIMITS OF GRADING" ON THIS SHEET OF THE EROSION CONTROL PLANS.

**MAINTENANCE**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF THE TEMPORARY E.S.C. MEASURES.
- SEDIMENT BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RUNOFF-PRODUCING RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
- NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF FILTER FABRIC SHALL BE ACCOMPLISHED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RUNOFF-PRODUCING RAINFALL. DEPOSITS MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE E.S.C. STRUCTURE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
- ALL TEMPORARY AND PERMANENT E.S.C. PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
- ALL TEMPORARY E.S.C. MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DIRT, MUD AND OTHER CONSTRUCTION DEBRIS WHICH MAY ACCUMULATE ON PAVED STREETS ADJACENT TO THE SITE AS A RESULT OF CONSTRUCTION ACTIVITY. CLEANING SHALL BE ON AN "AS NEEDED" BASIS USING SWEEPING AND WATER TO WASH THE CONSTRUCTION DEBRIS FROM THE STREET.
- ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY USING WATER. APPLICATIONS OF WATER MAY BE REQUIRED SEVERAL TIMES PER DAY DURING CONSTRUCTION ACTIVITY.

**E.S.C. STANDARD PLAN NOTES FROM APPENDIX 9A OF THE SPOKANE REGIONAL STORMWATER MANUAL**

- THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED IN ORDER TO BEST MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION CONTROL PROBLEMS.
  - CLEAR AND GRUB SUFFICIENTLY FOR INSTALL OF TEMPORARY E.S.C. BMP'S;
  - INSTALL TEMPORARY E.S.C. BMP'S, CONSTRUCTING SEDIMENT TRAPPING BMP'S AS ONE OF THE FIRST STEPS PRIOR TO GRADING;
  - CLEAR, GRUB AND ROUGH GRADE FOR ROADS, TEMPORARY ACCESS POINTS AND UTILITY LOCATIONS;
  - STABILIZE ROADWAY APPROACHES AND TEMPORARY ACCESS POINTS WITH THE APPROPRIATE CONSTRUCTION ENTRY BMP;
  - CLEAR, GRUB AND GRADE INDIVIDUAL LOTS OR GROUPS OF LOTS;
  - TEMPORARILY STABILIZE, THROUGH RE-VEGETATION OR OTHER APPROPRIATE BMP'S, LOTS OR GROUPS OF LOTS IN SITUATIONS WHERE SUBSTANTIAL CUT OR FILL SLOPES ARE A RESULT OF THE SITE GRADING;
  - CONSTRUCT ROADS, BUILDINGS, PERMANENT STORMWATER FACILITIES. (I.E. INLETS, PONDS, U.I.C. FACILITIES, ETC.);
  - PROTECT ALL PERMANENT STORMWATER FACILITIES UTILIZING THE APPROPRIATE BMP'S;
  - INSTALL PERMANENT E.S.C. CONTROLS, WHEN APPLICABLE; AND,
  - REMOVE TEMPORARY E.S.C. CONTROLS WHEN;
- PERMANENT E.S.C. CONTROLS, WHEN APPLICABLE, HAVE BEEN COMPLETELY INSTALLED;
- ALL LAND-DISTURBING ACTIVITIES THAT HAVE THE POTENTIAL TO CAUSE EROSION AND SEDIMENTATION PROBLEMS HAVE CEASED; AND,
- VEGETATION HAD BEEN ESTABLISHED IN THE AREAS NOTED AS REQUIRING VEGETATION ON THE ACCEPTED E.S.C. PLAN ON FILE WITH THE LOCAL JURISDICTION.
- INSPECT ALL ROADWAYS, AT THE END OF EACH DAY, ADJACENT TO THE CONSTRUCTION ACCESS ROUTE. IF IT IS EVIDENT THAT SEDIMENT HAS BEEN TRACKED OFF SITE AND/OR BEYOND THE ROADWAY APPROACH, CLEANING IS REQUIRED.
- IF SEDIMENT REMOVAL IS NECESSARY PRIOR TO STREET WASHING, IT SHALL BE REMOVED BY SHOVELING OR PICKUP SWEEPING AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- IF STREET WASHING IS REQUIRED TO CLEAN SEDIMENT TRACKED OFF SITE, ONCE SEDIMENT HAS BEEN REMOVED, STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON-SITE OR OTHERWISE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.
- RESTORE CONSTRUCTION ACCESS ROUTE EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITION.
- RETAIN THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION IN AND UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICAL.
- INSPECT SEDIMENT CONTROL BMP'S WEEKLY AT A MINIMUM, DAILY DURING A STORM EVENT, AND AFTER ANY DISCHARGE FROM THE SITE (STORMWATER OR NON-STORMWATER). THE INSPECTION FREQUENCY MAY BE REDUCED TO ONCE A MONTH IF THE SITE IS STABILIZED AND INACTIVE.
- CONTROL FUGITIVE DUST FROM CONSTRUCTION ACTIVITY IN ACCORDANCE WITH THE STATE AND/OR LOCAL AIR QUALITY CONTROL AUTHORITIES WITH JURISDICTION OVER THE PROJECT AREA.
- STABILIZE EXPOSED UNWORKED SOILS (INCLUDING STOCKPILES), WHETHER AT FINAL GRADE OR NOT WITHIN 10 DAYS DURING THE REGIONAL DRY SEASON (JULY 1 TO SEPTEMBER 30) AND WITHIN 5 DAYS DURING THE REGIONAL WET SEASON (OCTOBER 1 THRU JUNE 30). SOILS MUST BE STABILIZED AT THE END OF A SHIFT BEFORE A HOLIDAY WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. THE TIME LIMIT MAY ONLY BE ADJUSTED BY A LOCAL JURISDICTION WITH A "QUALIFIED LOCAL PROGRAM," IF IT CAN BE DEMONSTRATED THAT THE RECENT PRECIPITATION JUSTIFIES A DIFFERENT STANDARD AND MEETS THE REQUIREMENTS SET FORTH IN THE CONSTRUCTION STORMWATER GENERAL PERMIT.
- PROTECT INLETS, DRYWELLS, CATCH BASINS AND OTHER STORMWATER MANAGEMENT FACILITIES FROM SEDIMENT, WHETHER OR NOT FACILITIES ARE OPERABLE.
- KEEP ROADS ADJACENT TO INLETS CLEAN.
- INSPECT INLETS WEEKLY AT A MINIMUM AND DAILY FOR STORM EVENTS.
- CONSTRUCT STORMWATER CONTROL FACILITIES (DETENTION/RETENTION STORAGE POND OR SWALES) BEFORE GRADING BEGINS. THESE FACILITIES SHALL BE OPERABLE BEFORE THE CONSTRUCTION OF IMPERVIOUS SITE IMPROVEMENTS.
- STOCKPILE MATERIALS (SUCH AS TOPSOIL) ON SITE, KEEPING OFF OF ROADWAY AND SIDEWALKS.
- COVER, CONTAIN AND PROTECT ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCT, AND NON-INERT WASTES PRESENT ON SITE FROM VANDALISM (SEE CHAPTER 173-304 W.A.C. FOR THE DEFINITION OF INERT WASTE), USE SECONDARY CONTAINMENT FOR ON-SITE FUELING TANKS.
- CONDUCT MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEMS REPAIRS, SOLVENT AND DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES THAT MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF USING SPILL RECONVENTION MEASURES, SUCH AS DRIP PANS, CLEAN ALL CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. IF RAINING OVER EQUIPMENT OR VEHICLE, PERFORM EMERGENCY REPAIRS ON SITE USING TEMPORARY PLASTIC BENEATH THE VEHICLE.
- CONDUCT APPLICATION OF AGRICULTURAL CHEMICALS, INCLUDING FERTILIZERS AND PESTICIDES, IN SUCH A MANNER, AND AT APPLICATION RATES, THAT INHIBITS THE LOSS OF CHEMICALS INTO STORMWATER RUNOFF FACILITIES. AMEND MANUFACTURER'S RECOMMENDED APPLICATION RATES AND PROCEDURES TO MEET THIS REQUIREMENT, IF NECESSARY.
- INSPECT ON A REGULAR BASIS (AT A MINIMUM WEEKLY, AND DAILY DURING/AFTER A RUNOFF PRODUCING EVENT) AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMP'S TO ENSURE SUCCESSFUL PERFORMANCE OF THE BMP'S. NOTE THAT INLET PROTECTIONS DEVICES SHALL BE CLEANED OR REMOVED AND REPLACE BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE.
- REMOVE TEMPORARY E.S.C. BMP'S WITHIN 30 DAYS AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. PERMANENTLY STABILIZE AREA THAT ARE DISTURBED DURING REMOVAL PROCESS.
- A DAILY LOG SHALL BE MAINTAINED ONSITE AND AVAILABLE FOR INSPECTION REGARDLESS OF STORM ACTIVITY. THE CONTRACTOR SHALL NOTE CHANGES (DAILY) TO EROSION CONTROL MEASURES. A SITE LOG SHALL BE COMPLETED WITH THE PROJECT PER COSV SS 5.4.

DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

|               |     |
|---------------|-----|
| <b>SCALE:</b> |     |
| HORIZONTAL:   | N/A |
| VERTICAL:     | N/A |

|           |          |
|-----------|----------|
| PROJ #:   | 13-1166  |
| DATE:     | 08/14/18 |
| DRAWN:    | RMA      |
| REVIEWED: | TRW      |

**WCE**  
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**SPOKANE VALLEY PAINTED HILLS PRD  
 SWPPP STANDARD NOTES  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

|              |                |
|--------------|----------------|
| <b>SHEET</b> | <b>C9.1</b>    |
| JOB NUMBER   | <b>13-1166</b> |

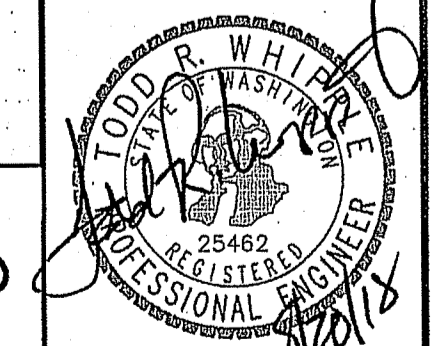
**PLANS  
 NOT APPROVED  
 BY AGENCY**

City of Spokane Valley  
 Project/Permit No.:  
**SUB-2016-0001**  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0068  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Revised:  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to  
 Street Standards and  
 Accepted per Chapter 1.2  
 Date Accepted \_\_\_\_\_  
 Acceptance Comments \_\_\_\_\_



SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



### BMP C233: SILT FENCE

INFORMATION TAKEN FROM CHAPTER 7 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL 2004 EDITION

**PURPOSE:** USE OF SILT FENCE REDUCES THE TRANSPORT OF COARSE SEDIMENT FROM A CONSTRUCTION SITE BY PROVIDING A TEMPORARY PHYSICAL BARRIER TO SEDIMENT AND REDUCING THE RUNOFF VELOCITIES OF OVERLAND FLOW. SEE FIGURE 7.3.20 OF THE EASTERN WASHINGTON STORMWATER MANUAL OR DETAIL BELOW FOR DETAILS ON SILT FENCE CONSTRUCTION.

**CONDITIONS OF USE:** SILT FENCE MAY BE USED DOWNSLOPE OF ALL DISTURBED AREAS. SILT FENCE IS NOT INTENDED TO TREAT CONCENTRATED FLOWS, NOR IS IT INTENDED TO TREAT SUBSTANTIAL AMOUNTS OF OVERLAND FLOW. ANY CONCENTRATED FLOWS MUST BE CONVEYED THROUGH THE DRAINAGE SYSTEM TO A SEDIMENT POND. THE ONLY CIRCUMSTANCE IN WHICH OVERLAND FLOW CAN BE TREATED SOLELY BY A SILT FENCE, RATHER THAN BY A SEDIMENT POND, IS WHEN THE AREA DRAINING TO THE FENCE IS ONE ACRE OR LESS AND FLOW RATES ARE LESS THAN 0.5 CFS.

SILT FENCES SHOULD NOT BE CONSTRUCTED IN STREAMS OR USED IN V-SHAPED DITCHES. THEY ARE NOT AN ADEQUATE METHOD OF SILT CONTROL FOR ANYTHING DEEPER THAN SHEET OR OVERLAND FLOW.

**DESIGN AND INSTALLATION:** DRAINAGE AREA OF 1 ACRE OR LESS OR IN COMBINATION WITH SEDIMENT BASIN IN A LARGER SITE.

MAXIMUM SLOPE STEEPNESS (NORMAL OR PERPENDICULAR TO FENCE LINE) 1:1.  
 MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE OF 100 FEET.  
 NO FLOWS GREATER THAN 0.5 CFS.

THE GEOTEXTILE USED SHALL MEET THE FOLLOWING STANDARDS. ALL GEOTEXTILE PROPERTIES LISTED BELOW ARE MINIMUM AVERAGE ROLL VALUES.

|                                      |  |
|--------------------------------------|--|
| POLYMERIC MESH AOS (ASTM D4751)      | 0.60MM MAX. FOR SLIT WOVENS (#30 SIEVE). 0.30MM MAX. FOR ALL OTHER GEOTEXTILE TYPES (#90 SIEVE).   |
| WATER PERMITTIVITY (ASTM D4491)      | 0.15MM MAX. FOR ALL FABRIC TYPES (#100 SIEVE).   |
| GRAB TENSILE STRENGTH (ASTM D4632)   | 0.02/SEC MIN. 180 LBS. MIN. FOR EXTRA STRENGTH FABRIC. 100 LBS. MIN. FOR STANDARD STRENGTH FABRIC. |
| GRAB TENSILE ELONGATION (ASTM D4632) | 30% MAX.   |
| ULTRAVIOLET RESISTANCE (ASTM D4335)  | 70% MIN.   |

STANDARD STRENGTH FABRICS SHALL BE SUPPORTED WITH WIRE MESH, CHICKEN WIRE, 2-INCH X 2-INCH SAFETY FENCE, OR JUST MESH TO INCREASE THE STRENGTH OF FABRIC. SILT FENCE MATERIALS ARE AVAILABLE THAT HAVE SYNTHETIC MESH BACKING ATTACHED.

FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0°F. TO 120°F.

100 PERCENT BIODEGRADABLE SILT FENCE IS AVAILABLE THAT IS STRONG, LONG LASTING, AND CAN BE LEFT IN PLACE AFTER THE PROJECT IS COMPLETED, IF PERMITTED BY LOCAL REGULATIONS.

CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY SILT FENCES AT THE LOCATIONS SHOWN IN THE PLANS. THE SILT FENCE SHALL BE CONSTRUCTED IN THE AREAS OF CLEARING, GRADING, OR DRAINAGE PRIOR TO STARTING THOSE ACTIVITIES. A SILT FENCE SHALL NOT BE CONSIDERED TEMPORARY IF THE SILT FENCE MUST OPERATE BEYOND THE LENGTH OF THE CONTRACT. THE SILT FENCE SHALL PREVENT SOIL CARRIED BY RUNOFF WATER FROM GOING BENEATH, THROUGH, OR OVER THE TOP OF THE SILT FENCE, BUT SHALL ALLOW WATER TO PASS THROUGH THE FENCE.

THE MINIMUM HEIGHT OF THE TOP OF SILT FENCE SHALL BE 2 FEET AND THE MAXIMUM SHALL BE 2.5 FEET ABOVE THE ORIGINAL GROUND SURFACE.

**DESIGN AND INSTALLATION:** (CONTINUED)

THE GEOTEXTILE SHALL BE SEWN TOGETHER AT THE POINT OF MANUFACTURE, OR AT AN APPROVED LOCATION AS DETERMINED BY THE ENGINEER, TO FORM GEOTEXTILE LENGTHS AS REQUIRED. ALL SEWN SEAMS SHALL BE LOCATED AT A SUPPORT POST. ALTERNATIVELY, TWO SECTIONS OF SILT FENCE CAN BE OVERLAPPED, PROVIDED THE CONTRACTOR CAN DEMONSTRATE, TO THE SATISFACTION OF THE ENGINEER, THAT THE OVERLAP IS LONG ENOUGH AND THAT THE ADJACENT FENCE SECTIONS ARE CLOSE ENOUGH TOGETHER TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.

THE GEOTEXTILE SHALL BE ATTACHED ON THE UP-SLOPE SIDE OF THE POSTS AND SUPPORT SYSTEM WITH STAPLES, WIRE, OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE GEOTEXTILE SHALL BE ATTACHED IN A MANNER THAT REDUCES THE POTENTIAL FOR GEOTEXTILE TEARING AT THE STAPLES, WIRE, OR OTHER CONNECTION DEVICE. SILT FENCE BACKUP SUPPORT FOR THE GEOTEXTILE IN THE FORM OF A WIRE OF PLASTIC MESH IS DEPENDENT ON THE PROPERTIES OF THE GEOTEXTILE SELECTED FOR USE. IF WIRE OR PLASTIC BACK-UP MESH IS USED, THE MESH SHALL BE FASTENED SECURELY TO THE UP-SLOPE OF THE POSTS WITH THE GEOTEXTILE BEING UP-SLOPE OF THE MESH BACK SUPPORT.

THE GEOTEXTILE AT THE BOTTOM OF THE FENCE SHALL BE BURIED IN A TRENCH TO A MINIMUM DEPTH OF 4" BELOW THE GROUND SURFACE. THE TRENCH SHALL BE BACKFILLED AND THE SOIL TAMPED IN PLACE OVER THE BURIED PORTION OF THE GEOTEXTILE, SUCH THAT NO FLOW CAN PASS BENEATH THE FENCE AND SCOURING CAN NOT OCCUR. WHEN WIRE OR POLYMERIC BACK-UP SUPPORT MESH IS USED, THE WIRE OR POLYMERIC MESH SHALL EXTEND INTO THE TRENCH A MINIMUM OF 3".

THE FENCE POSTS SHALL BE PLACED OR DRIVEN A MIN. OF 18". A MIN. DEPTH OF 12" IS ALLOWED IF TOPSOIL OR OTHER SOFT SUBGRADE SOIL IS NOT PRESENT AND A MIN. DEPTH OF 18" CANNOT BE REACHED. FENCE POST DEPTHS SHALL BE INCREASED IF THE FENCE IS LOCATED ON SLOPES OF 3:1 OR STEEPER AND THE SLOPE IS PERPENDICULAR TO THE FENCE. IF REQUIRED POST DEPTHS CANNOT BE OBTAINED, THE POSTS SHALL BE ADEQUATELY SECURED BY BRACING OR GUYING TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT LOADING.

SILT FENCES SHALL BE LOCATED ON CONTOUR AS MUCH AS POSSIBLE, EXCEPT AT THE ENDS OF THE FENCE, WHERE THE FENCE SHALL BE TURNED UPHILL SUCH THAT THE SILT FENCE CAPTURES THE RUNOFF WATER AND PREVENTS WATER FROM FLOWING AROUND THE END OF THE FENCE.

IF THE FENCE MUST CROSS CONTOURS, WITH THE EXCEPTION OF THE END OF THE FENCE, GRAVEL CHECK DAMS PLACED PERPENDICULAR TO THE BACK OF THE FENCE SHALL BE USED TO MINIMIZE CONCENTRATED FLOW AND EROSION ALONG THE BACK OF THE FENCE. THE GRAVEL CHECK DAMS SHALL BE APPROXIMATELY 1' DEEP AT THE BACK OF THE FENCE. IT SHALL BE CONTINUED PERPENDICULAR TO THE FENCE AT THE SAME ELEVATION UNTIL THE TOP OF THE CHECK DAM INTERCEPTS THE GROUND SURFACE BEHIND THE FENCE. THE GRAVEL CHECK DAMS SHALL CONSIST OF CRUSHED SURFACING TOP COURSE GRAVEL, BACKFILL FOR WALLS, OR SHOULDER BALLAST. THE GRAVEL CHECK DAMS SHALL BE LOCATED EVERY 10' ALONG THE FENCE WHERE THE FENCE MUST CROSS THE CONTOURS. THE SLOPE OF THE FENCE LINE WHERE THE CONTOURS MUST BE CROSSED SHALL NOT BE STEEPER THAN 3:1.

WOOD, STEEL OR EQUIVALENT POSTS SHALL BE USED. WOOD POSTS SHALL HAVE MINIMUM DIMENSIONS OF 2"x2"x3" MIN. LENGTH, AND SHALL BE FREE OF DEFECTS SUCH AS KNOTS, SPLITS, OR GOUGES. STEEL POSTS SHALL CONSIST OF EITHER SIZE NO. 6 REBAR OR LARGER, ASTM A 120 STEEL PIPE WITH A MIN. DIAMETER, OR 1-INCH, U, T, L, OR C SHAPE STEEL POSTS WITH A MIN. WEIGHT OF 1.35 LBS./FT. OR OTHER STEEL POSTS HAVING EQUIVALENT STRENGTH AND BENDING RESISTANCE TO THE POST SIZES LISTED. THE SPACING OF THE SUPPORTS POSTS SHALL BE A MAXIMUM OF 6'.

FENCE BACK-UP SUPPORT, IF USED, SHALL CONSIST OF STEEL WIRE WITH A MAX. MESH SPACING OF 2", OR A PREFABRICATED POLYMERIC MESH. THE STRENGTH OF WIRE OR POLYMERIC MESH SHALL BE EQUIVALENT TO OR GREATER THAN 180 LBS. GRAB TENSILE STRENGTH. THE POLYMERIC MESH MUST BE AS RESISTANT TO ULTRAVIOLET RADIATION AS THE GEOTEXTILE IT SUPPORTS.

SILT FENCE INSTALLATION USING THE SLICING METHOD SPECIFICATION DETAILS FOLLOW.

THE BASE OF BOTH END POSTS MUST BE AT LEAST 2-4" ABOVE THE TOP OF THE SILT FENCE FABRIC ON THE MIDDLE POSTS FOR DITCH CHECKS TO DRAIN PROPERLY. USE A HAND LEVEL OR STRING LEVEL, IF NECESSARY, TO MARK BASE POINTS BEFORE INSTALLATION.

INSTALL POSTS 3-4' APART IN CRITICAL RETENTION AREAS, AND 6-7' APART IN STANDARD APPLICATIONS.

INSTALL POSTS 24" DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC. ENABLING POSTS TO SUPPORT THE FABRIC FROM THE UPSTREAM WATER PRESSURE.

INSTALL POSTS WITH NIPPLES FACING AWAY FROM THE SILT FENCE FABRIC.

ATTACH THE FABRIC TO EACH POST WITH THREE TIES, ALL SPACED WITH THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1 INCH VERTICALLY APART, IN ADDITION, EACH TIE SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENING TO PREVENT SAGGING.

WRAP APPROXIMATELY 6 INCHES OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.

NO MORE THAN 24" OF A 36" FABRIC IS ALLOWED ABOVE GROUND LEVEL.

THE ROPE LOCK SYSTEM MUST BE USED IN ALL DITCH CHECK APPLICATIONS.

THE INSTALLATION SHOULD BE CHECKED AND CORRECTED FOR ANY DEVIATION BEFORE COMPACTION. USE A FLAT-BLADED SHOVEL TO TUCK FABRIC DEEPER INTO THE GROUND IF NECESSARY.

COMPACTION IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE WITH THE FRONT WHEEL OF A TRACTOR, SKID STEER, OR ROLLER EXERTING 80 PSI, COMPACT THE UPSTREAM SIDE FIRST AND THEN EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.

ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.

IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT POND.

IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF THE FLOWS PARALLEL TO THE FENCE, IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.

SEDIMENT DEPOSITS SHALL EITHER BE REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-THIRD THE HEIGHT OF THE SILT FENCE, OR A SECOND SILT FENCE INSTALLED.

IF THE FILTER FABRIC OR GEOTEXTILE HAS DETEIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

### BMP C105: STABILIZED CONSTRUCTION ENTRANCE

INFORMATION TAKEN FROM CHAPTER 7 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL 2004 EDITION

**PURPOSE:** CONSTRUCTION ENTRANCES ARE STABILIZED TO REDUCE THE AMOUNT OF SEDIMENT TRANSPORTED ONTO PAVED ROADS BY VEHICLES OR EQUIPMENT BY CONSTRUCTING A STABILIZED PAD OF QUARRY SPALLS AT ENTRANCES TO CONSTRUCTION SITES.

**CONDITIONS OF USE:** CONSTRUCTION ENTRANCES SHALL BE STABILIZED WHEREVER TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND TRAVELING ON PAVED ROADS OR OTHER PAVED AREAS WITHIN 1,000 FEET OF THE SITE.

ON LARGE COMMERCIAL, HIGHWAY, AND ROAD PROJECTS, THE DESIGNER AND OR CONTRACTOR SHOULD INCLUDE ENOUGH MATERIALS IN THE CONTRACT TO ALLOW FOR ADDITIONAL STABILIZED ENTRANCES NOT SHOWN IN THE INITIAL CONSTRUCTION SWPPP. IT IS DIFFICULT TO DETERMINE EXACTLY WHERE ACCESS TO THESE PROJECTS WILL TAKE PLACE; ADDITIONAL MATERIALS WILL ENABLE THE CONTRACTOR TO INSTALL THEM WHERE NEEDED.

**DESIGN AND INSTALLATION:** SEE FIGURE 7.3.2 OF THE EASTERN WATER STORMWATER MANAGEMENT MANUAL OR DETAIL BELOW.

THE SURFACE MATERIAL SHALL BE 4"-8" QUARRY SPALLS. SMALLER CRUSHED ROCK SUCH AS BASE COURSE MAY BE APPROPRIATE IN SOME SITUATIONS BUT, SINCE IT IS MORE LIKELY TO BE TRACKED OFF-SITE, MUST BE APPROVED BY THE LOCAL JURISDICTION.

A SEPARATION GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENT FROM PUMPING UP INTO THE ROCK PAD. THE GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS:

|  |                                  |
|--|----------------------------------|
| GRAB TENSILE STRENGTH (ASTM D4751)     | 200 PSI MIN.                     |
| GRAB TENSILE ELONGATION (ASTM D4632)   | 30% MAX.                         |
| MULLEN BURST STRENGTH (ASTM D3786-80A) | 400 PSI MIN.                     |
| AOS (ASTM D4751)                       | 20-45 (U.S. STANDARD SIEVE SIZE) |

IF SITE CONDITIONS DO NOT WARRANT THE USE OF GEOTEXTILE, IT IS NOT REQUIRED.

**MAINTENANCE STANDARDS:** IF QUARRY SPALLS (OR HOG FUEL) SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.

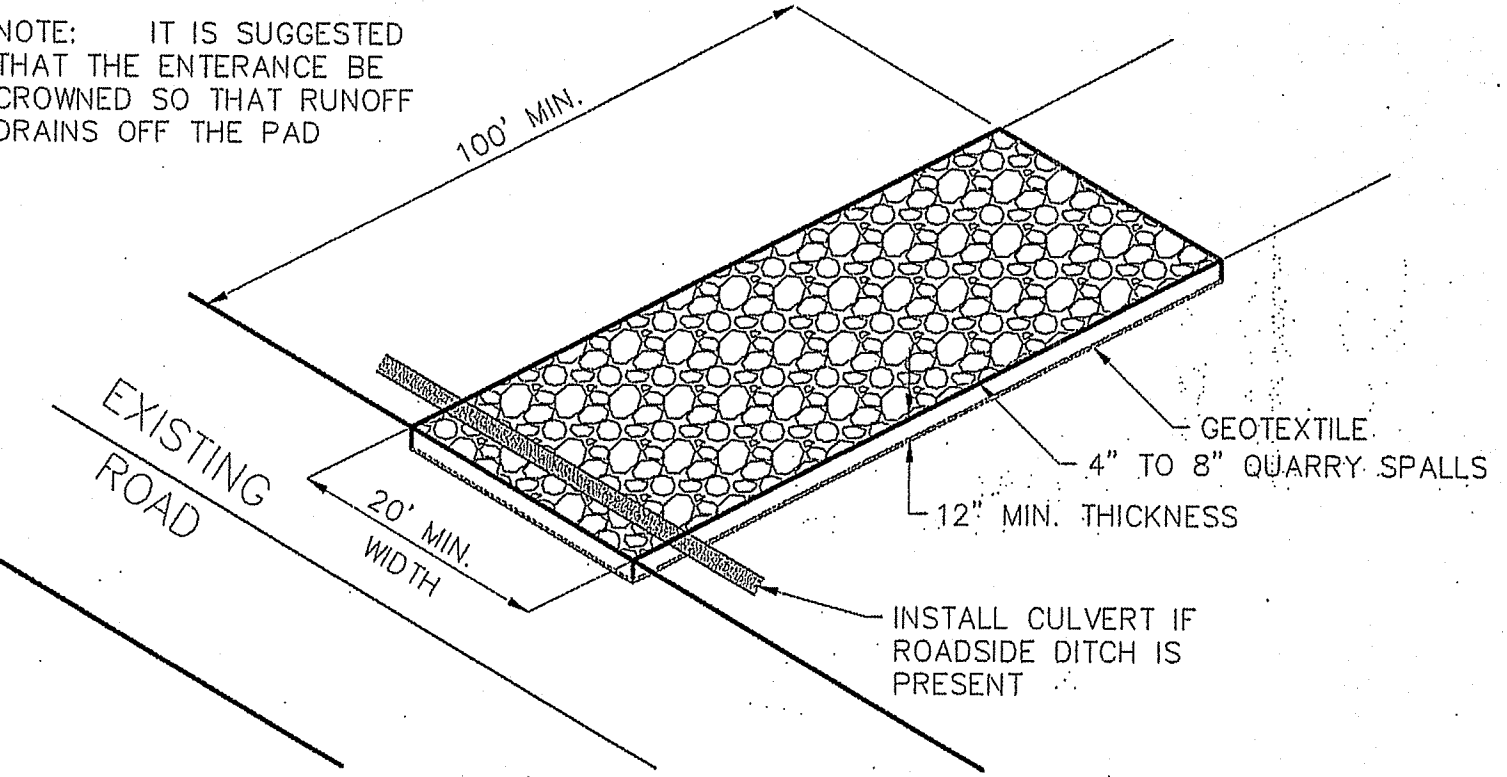
IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH.

ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED BY SHOVELING OR STREET SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREETS, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP WHERE IT CAN BE CONTROLLED.

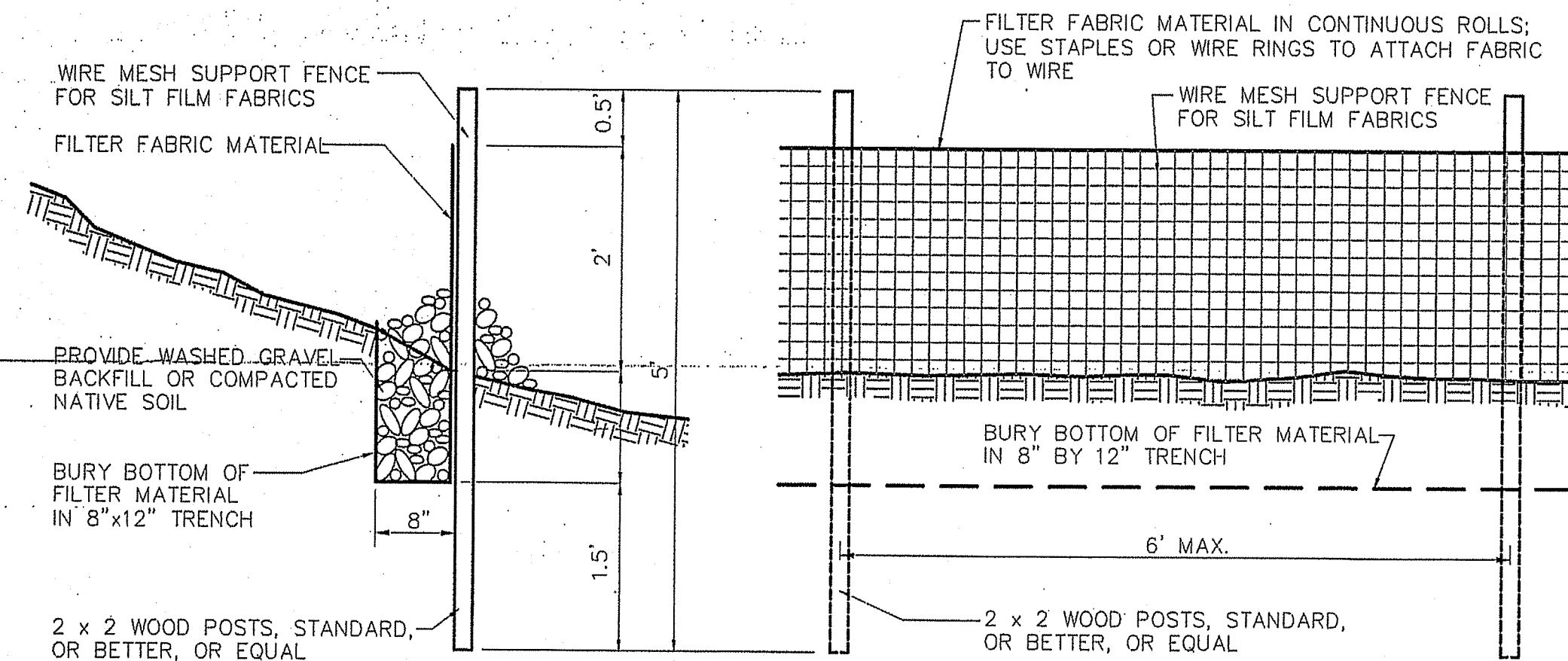
ANY QUARRY SPALLS THAT ARE LOOSEENED FROM THE PAD, WHICH END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.

IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING (SEE BMPS C103 AND C104) SHALL BE INSTALLED TO CONTROL TRAFFIC.

UPON PROJECT COMPLETION AND SITE STABILIZATION, ALL CONSTRUCTION ACCESSSES INTENDED AS PERMANENT ACCESS FOR MAINTENANCE SHALL BE PERMANENTLY STABILIZED.

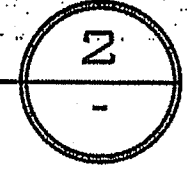
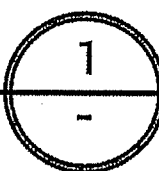


**ROCK CONSTRUCTION ENTRY**  
NOT TO SCALE



**SILT FENCE DETAIL**  
NOT TO SCALE

**MAINTENANCE STANDARDS:**



DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2008.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

|               |     |
|---------------|-----|
| <b>SCALE:</b> |     |
| HORIZONTAL:   | N/A |
| VERTICAL:     | N/A |

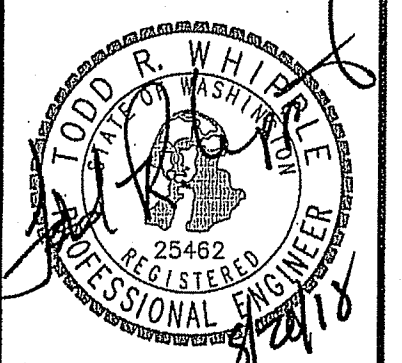
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| PROJ #:   | 13-1166  |
| DATE:     | 08/14/18 |
| DRAWN:    | RMA      |
| REVIEWED: | TRW      |

|                                     |            |
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| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |

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**SPOKANE VALLEY PAINTED HILLS PRD**  
**SWPPP BMPs**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

PLANS NOT APPROVED BY AGENCY



City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2018-0007  
 (Flood Plain Development)  
 EGR-2018-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer: \_\_\_\_\_  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_

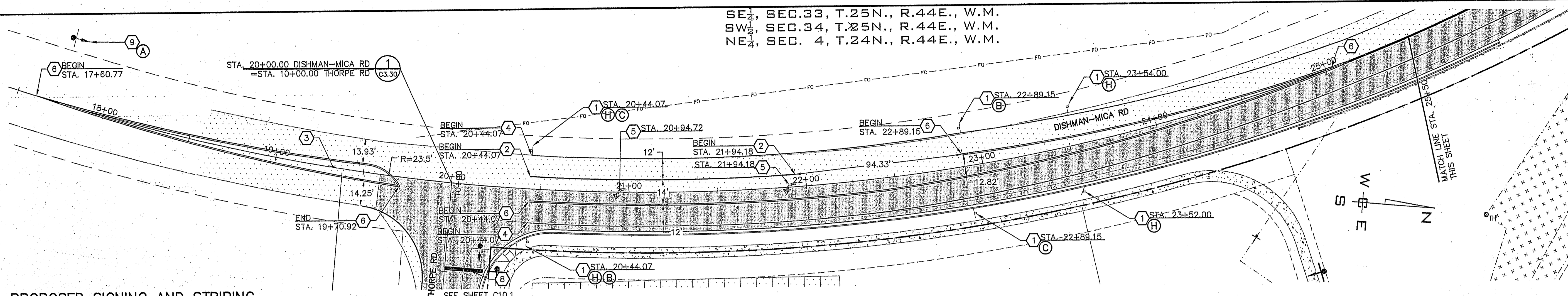
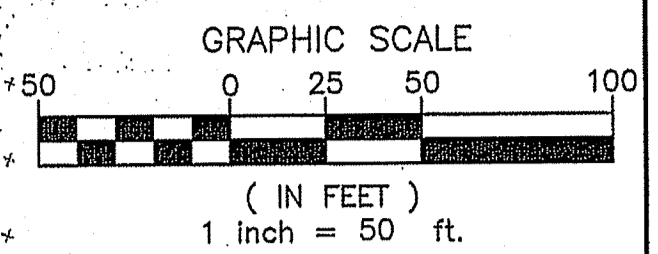
**SHEET**  
**C9.2**

JOB NUMBER  
**13-1166**

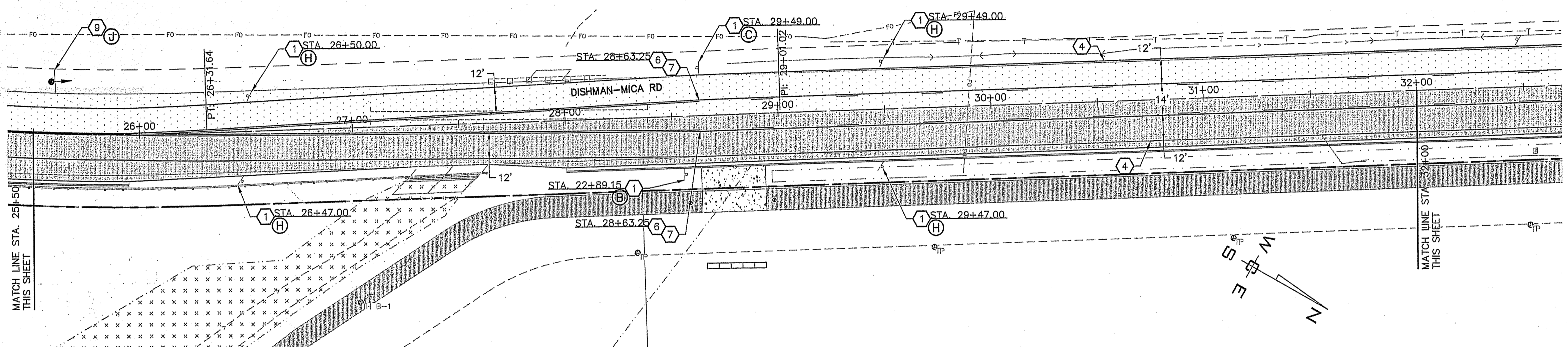


SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

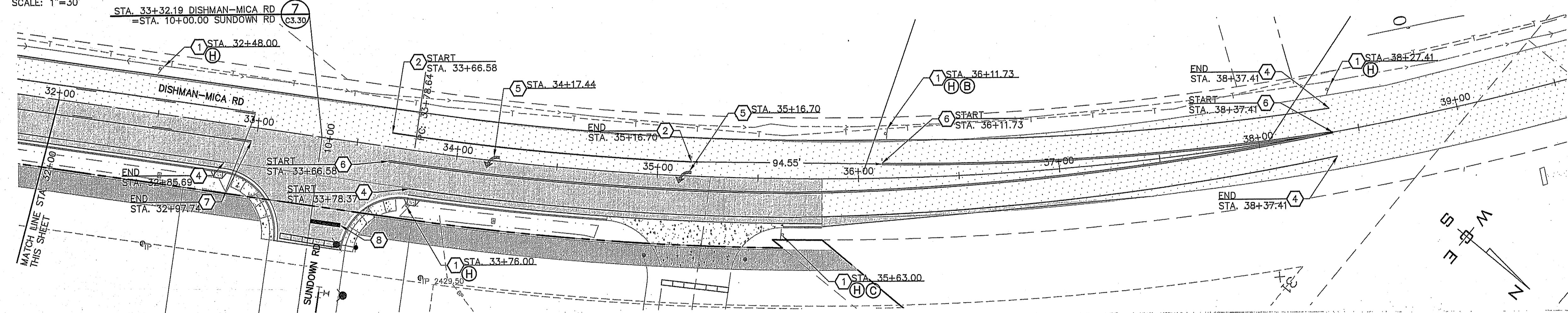
**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



**PROPOSED SIGNING AND STRIPING**  
 SCALE: 1"=30'



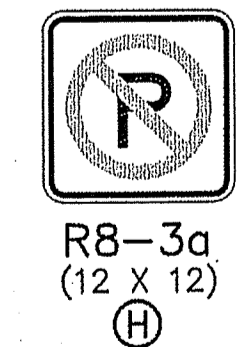
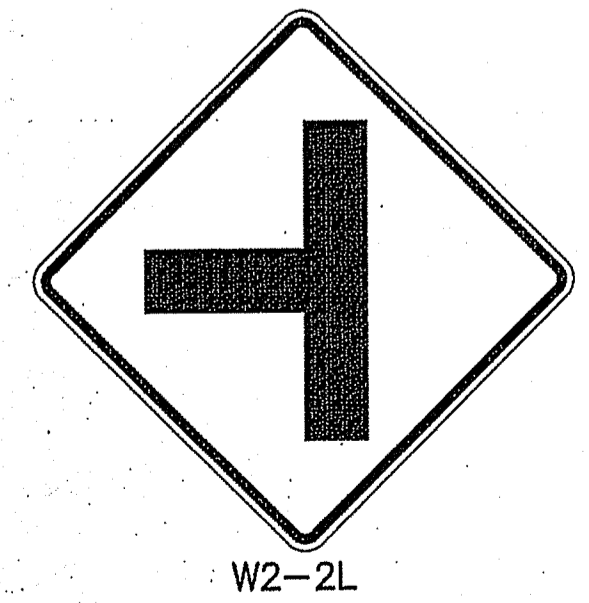
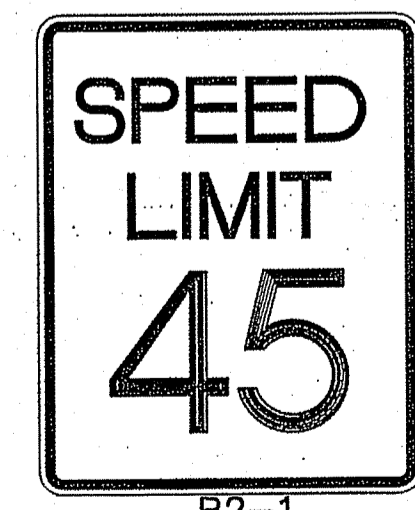
**PROPOSED SIGNING AND STRIPING**  
 SCALE: 1"=30'



**PROPOSED SIGNING AND STRIPING**  
 SCALE: 1"=30'

**CONSTRUCTION NOTES**

- 1) INSTALL TRAFFIC SIGN(S) INDICATED PER CITY OF SPOKANE VALLEY STANDARD PLANS. SEE PLAN VIEW FOR DETAILS.
- 2) PROVIDE AND INSTALL THERMOPLASTIC 6" WIDE WHITE TURN LANE LINE.
- 3) PROVIDE AND INSTALL PAINTED SPLITTER ISLAND PER WSDOT STANDARDS.
- 4) PROVIDE AND INSTALL THERMOPLASTIC 4" WIDE FOG LANE LINE PER CITY OF SPOKANE VALLEY STANDARD PLANS.
- 5) PROVIDE AND INSTALL PAVEMENT MARKING AS SHOWN PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 6) PROVIDE AND INSTALL THERMOPLASTIC 4" DOUBLE YELLOW LANE LINE PER CITY OF SPOKANE VALLEY STANDARDS. SEE PLAN VIEW FOR DETAILS.
- 7) PROVIDE AND INSTALL THERMOPLASTIC 4" TWO WAY LEFT TURN DOUBLE YELLOW LANE LINE PER CITY OF SPOKANE VALLEY STANDARDS. SEE PLAN VIEW FOR DETAILS.
- 8) PROVIDE AND INSTALL 2' WIDE STOP BAR PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 9) CONTRACTOR TO PROTECT EXISTING SIGN.

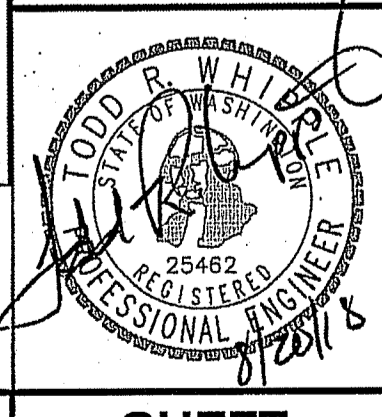


**PLANS NOT APPROVED BY AGENCY**

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewed:  
 New Street Miles - Public:  
 Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted:  
 Acceptance Comments:



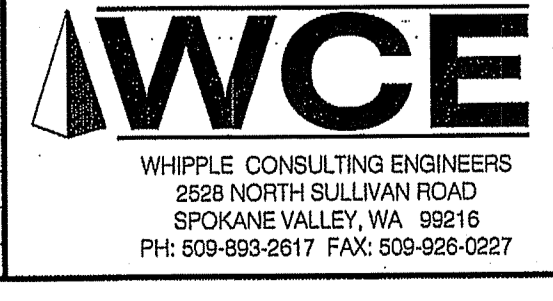
DATUM: NAVD - 88

TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD89) = 2009.67 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1"=30'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

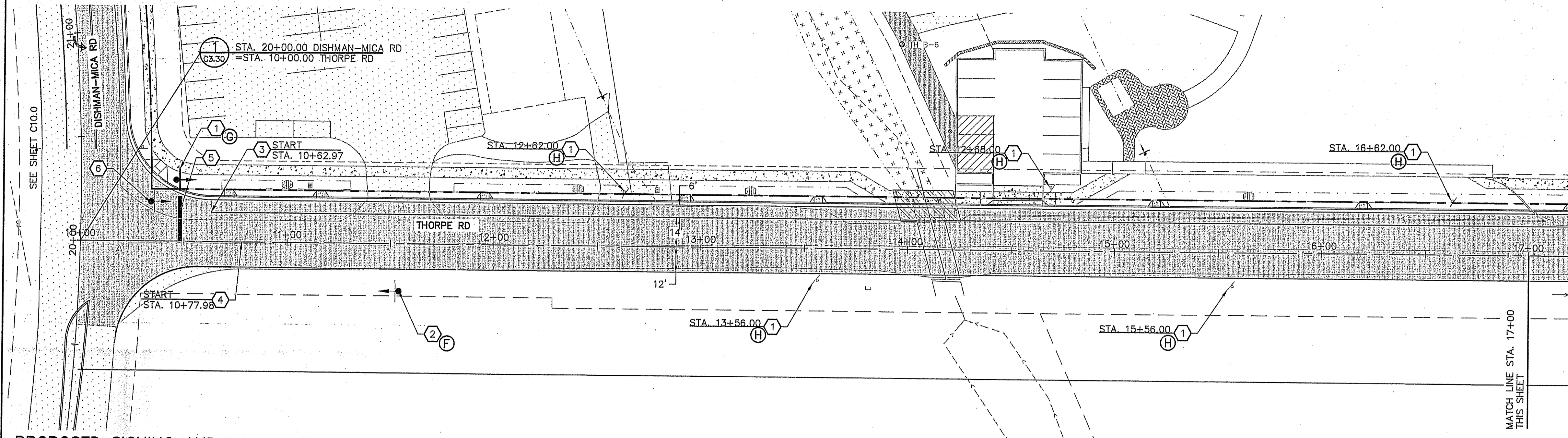
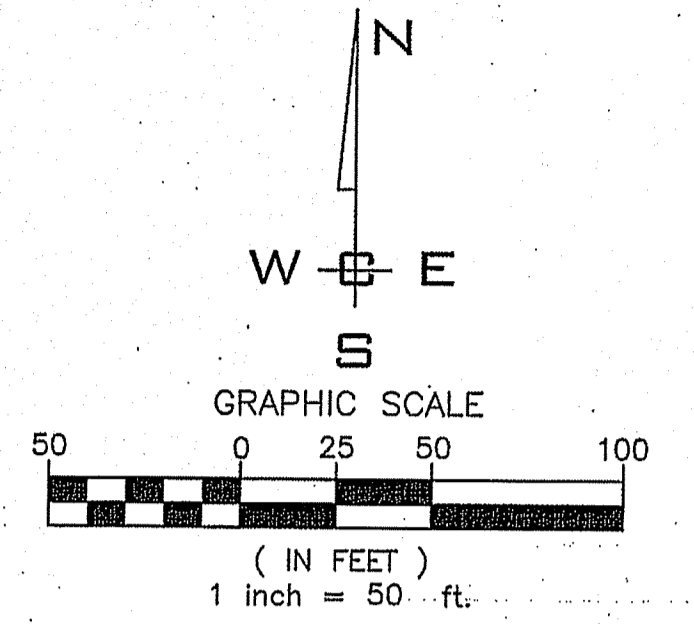


**SPOKANE VALLEY PAINTED HILLS PRD**  
**DISHMAN-MICA RD SIGNING & STRIPING**  
**DISHMAN-MICA RD.**  
**SPOKANE VALLEY, WA**

**SHEET C10.0**  
 JOB NUMBER  
**13-1166**

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

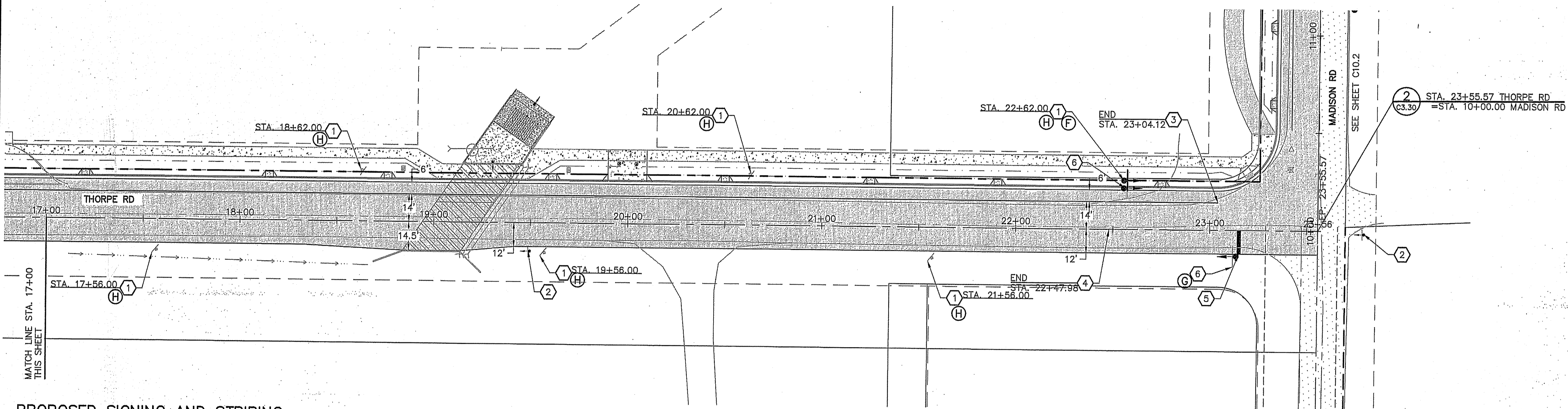
UNDERGROUND SERVICE ALERT  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG



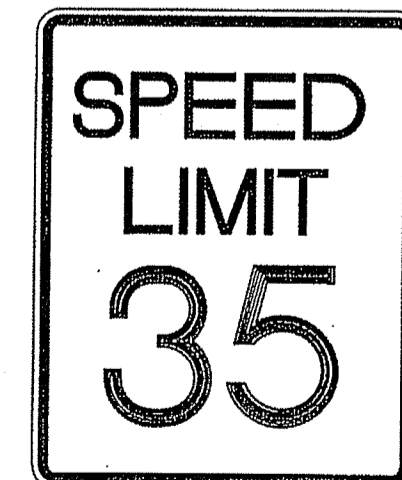
PROPOSED SIGNING AND STRIPING  
 SCALE: 1"=30'

**CONSTRUCTION NOTES**

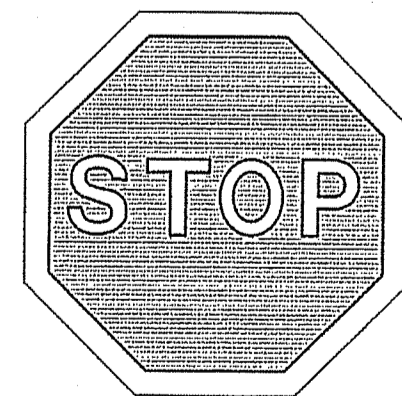
- 1) INSTALL TRAFFIC SIGN(S) INDICATED PER CITY OF SPOKANE VALLEY STANDARD PLANS. SEE PLAN VIEW FOR DETAILS.
- 2) PROTECT EXISTING SIGN.
- 3) PROVIDE AND INSTALL THERMOPLASTIC 4" WIDE FOG LANE LINE PER CITY OF SPOKANE VALLEY STANDARD PLANS.
- 4) PROVIDE AND INSTALL THERMOPLASTIC 4" SKIP LANE LINE PER CITY OF SPOKANE VALLEY STANDARDS. SEE PLAN VIEW FOR DETAILS.
- 5) PROVIDE AND INSTALL 2' WIDE STOP BAR PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 6) REMOVE EXISTING SIGN.



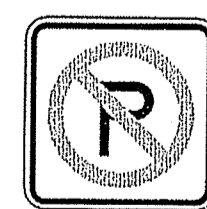
PROPOSED SIGNING AND STRIPING  
 SCALE: 1"=30'



R2-1  
 (F)



R1-1  
 (G)

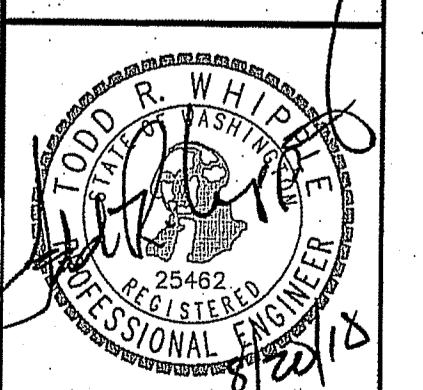


R8-3a  
 (12 X 12)  
 (H)

PLANS  
 NOT APPROVED  
 BY AGENCY

City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)  
 City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public: \_\_\_\_\_  
 Not Reviewed  
 Reviewed for Conformance to  
 Street Standards and  
 Accepted per Chapter 1.2  
 Date Accepted \_\_\_\_\_  
 Acceptance Comments \_\_\_\_\_



DATUM: NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) - 2008.87  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-16 | JPP | ORIGINAL PREPARATION |

SCALE:  
 HORIZONTAL:  
 1"=30'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

|                                     |            |
|-------------------------------------|------------|
| <input checked="" type="checkbox"/> | CIVIL      |
| <input type="checkbox"/>            | STRUCTURAL |
| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |

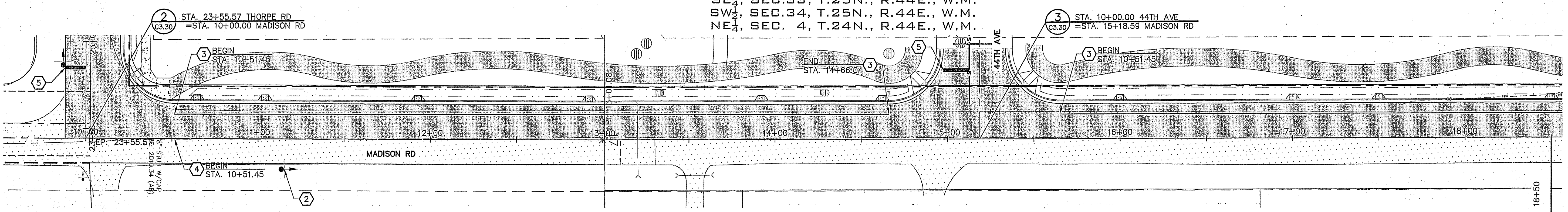
**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 2828 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WA 99216  
 PH: 509-926-2517 FAX: 509-926-0227

**SPOKANE VALLEY PAINTED HILLS PRD  
 THORPE RD SIGNING & STRIPING PLAN  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

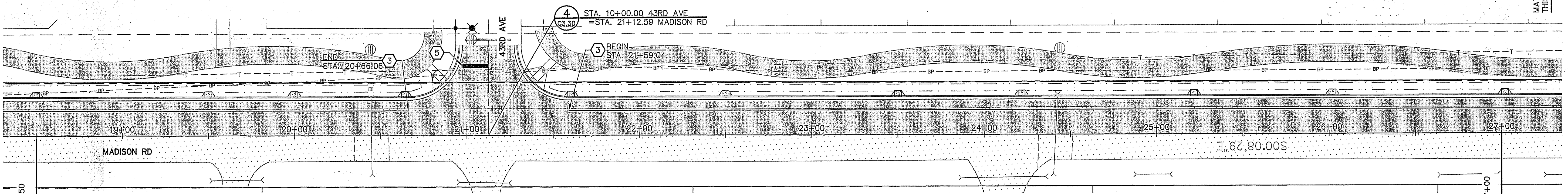
**SHEET  
 C10.1**  
 JOB NUMBER  
 13-1166

SE 1/4, SEC. 33, T.25N., R.44E., W.M.  
 SW 1/4, SEC. 34, T.25N., R.44E., W.M.  
 NE 1/4, SEC. 4, T.24N., R.44E., W.M.

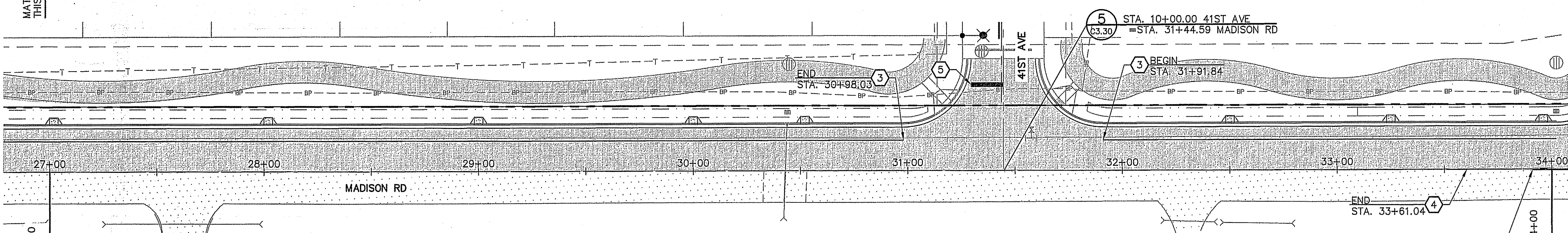
**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
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 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG



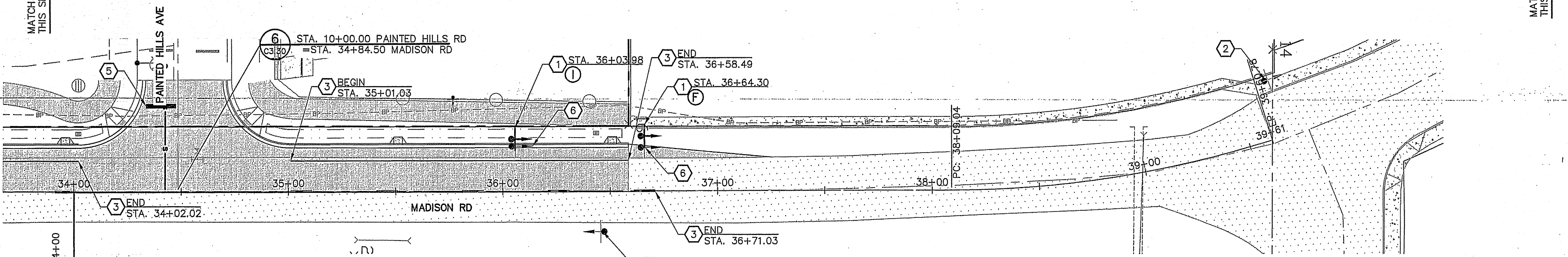
**PROPOSED SIGNING AND STRIPING**  
 SCALE: 1"=30'



**PROPOSED SIGNING AND STRIPING**  
 SCALE: 1"=30'



**PROPOSED SIGNING AND STRIPING**  
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**PROPOSED SIGNING AND STRIPING**  
 SCALE: 1"=30'

**CONSTRUCTION NOTES**

- 1 INSTALL TRAFFIC SIGN(S) INDICATED PER CITY OF SPOKANE VALLEY STANDARD PLANS. SEE PLAN VIEW FOR DETAILS.
- 2 PROTECT EXISTING SIGN.
- 3 PROVIDE AND INSTALL THERMOPLASTIC 4" WIDE FOG LANE LINE PER CITY OF SPOKANE VALLEY STANDARD PLANS.
- 4 PROVIDE AND INSTALL THERMOPLASTIC 4" SKIP LANE LINE PER CITY OF SPOKANE VALLEY STANDARDS. SEE PLAN VIEW FOR DETAILS.
- 5 PROVIDE AND INSTALL 2' WIDE STOP BAR PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
- 6 REMOVE EXISTING SIGN.
- 7 PROVIDE AND INSTALL THERMOPLASTIC 4" LIMITED PASSING LANE LINE PER CITY OF SPOKANE STANDARDS AND SPECIFICATIONS.



R2-1  
 F

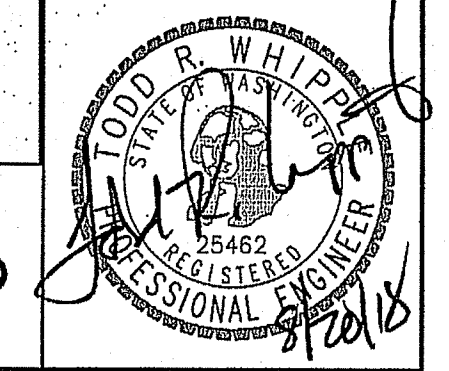
W11-3  
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City of Spokane Valley  
 Project/Permit No.:  
 SUB-2015-0001  
 (Subdivision)  
 FPD-2016-0007  
 (Flood Plain Development)  
 EGR-2016-0066  
 (Engineered Grading)

City of Spokane Valley  
 Development Engineering

Reviewer:  
 New Street Miles - Public: \_\_\_\_\_

Not Reviewed  
 Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2  
 Date Accepted: \_\_\_\_\_  
 Acceptance Comments: \_\_\_\_\_



**PLANS  
 NOT APPROVED  
 BY AGENCY**

DATUM: NAVD - 88  
 TBM 9-6 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| 2   | 08-14-18 | JPP | REVISED PLANS        |
| 1   | 08-12-18 | JPP | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1"=30'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 08/14/18  
 DRAWN: JPP  
 REVIEWED: TRW

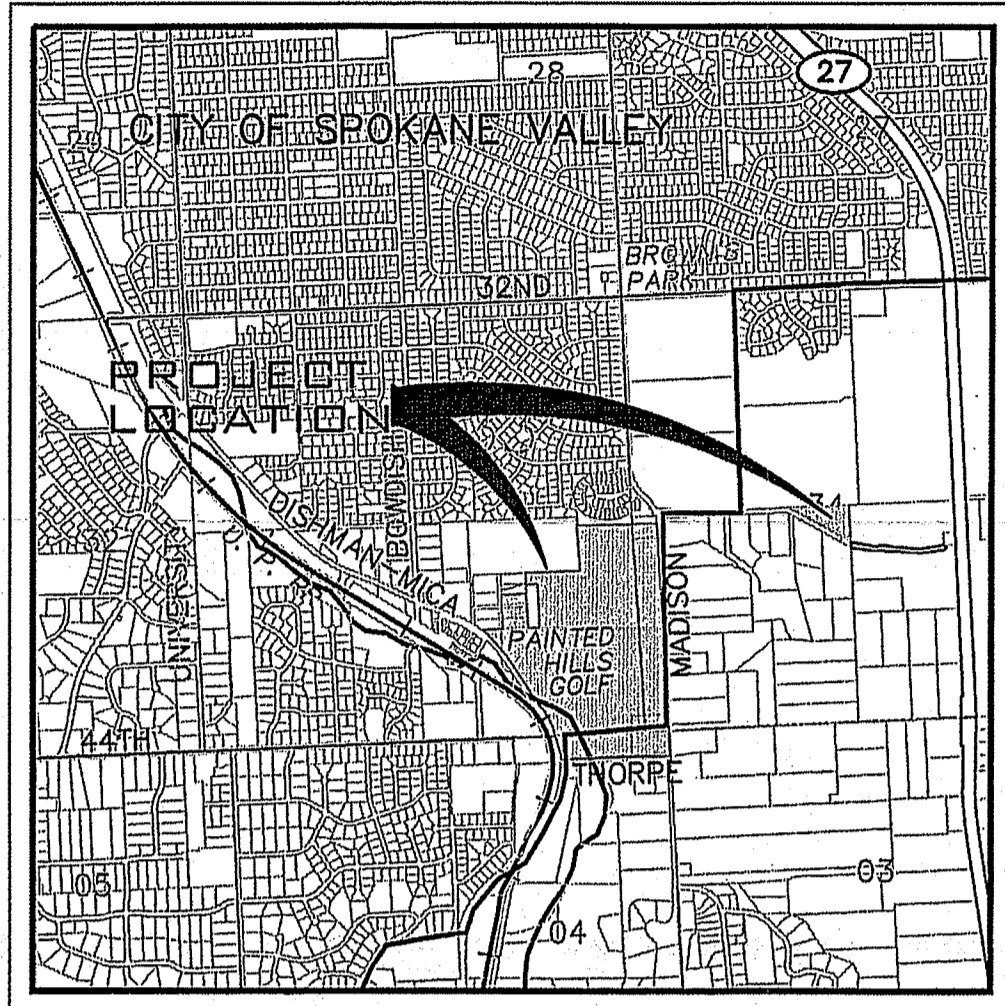


**SPOKANE VALLEY PAINTED HILLS PRD  
 MADISON RD SIGNING & STRIPING PLAN  
 DISHMAN-MICA RD.  
 SPOKANE VALLEY, WA**

**SHEET  
 C10.2**  
 JOB NUMBER  
 13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

# IMPROVEMENT PLANS GUSTIN PIPE PLANS LOCATED IN A PORTION OF SE 1/4, SEC. 33, T. 25N., R. 44E., W.M. SPOKANE COUNTY, WA



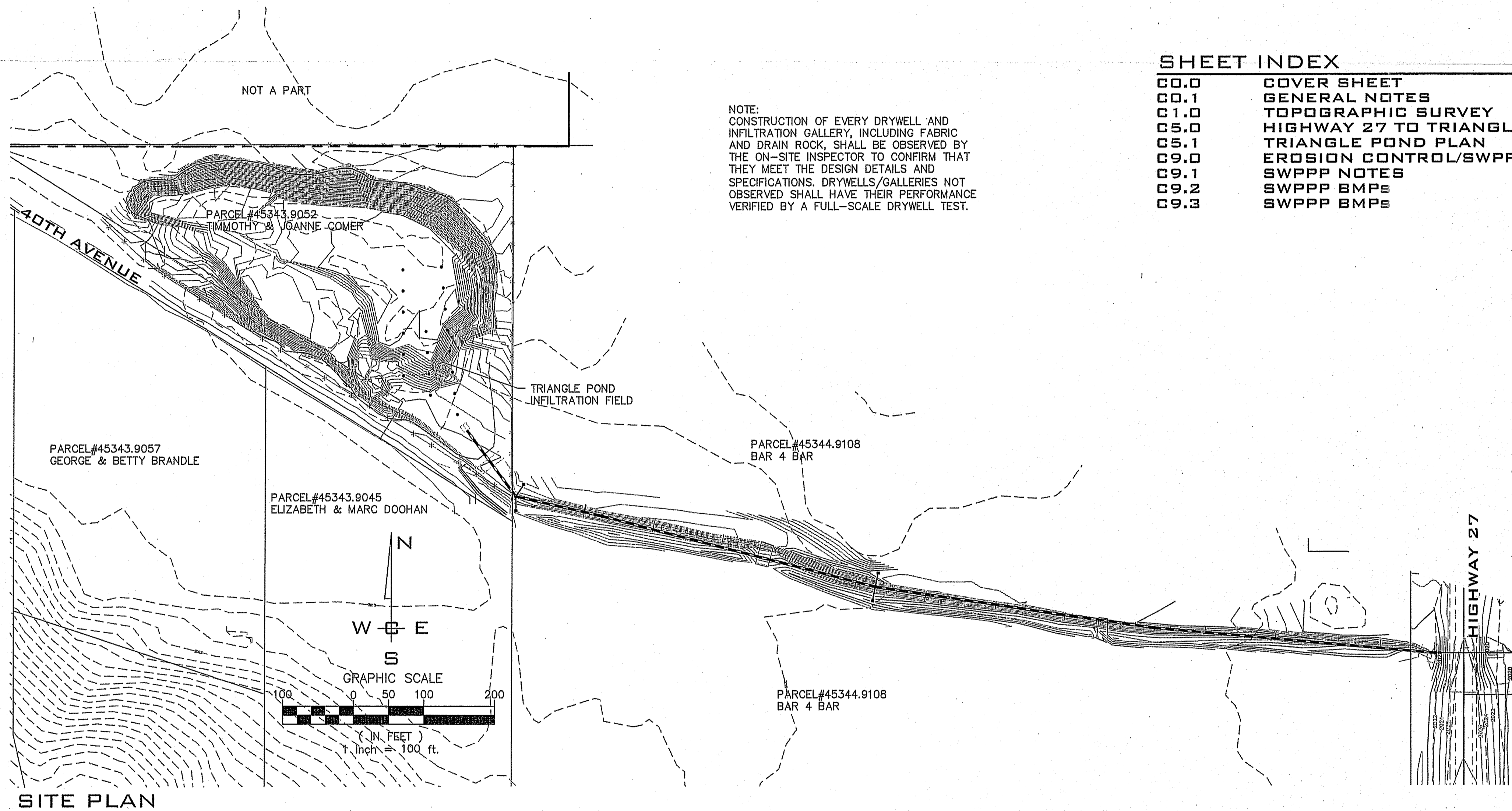
LOCATION MAP

## LEGEND

| EXISTING          | DESCRIPTION               | PROPOSED   |
|-------------------|---------------------------|------------|
| ---               | ROADWAY CENTER LINE       | ---        |
| ---               | RIGHT OF WAY LINE         | ---        |
| ---               | PROPERTY LINE             | ---        |
| ---               | EASEMENT LINE             | ---        |
| -x-x-             | FENCE                     | -x-x-      |
| ---               | CURB                      | ---        |
| ---               | PAVEMENT                  | ---        |
| ---               | GRAVEL                    | ---        |
| ---               | CONCRETE                  | ---        |
| ---               | BUILDINGS & STRUCTURES    | ---        |
| ---               | MONUMENT                  | ---        |
| <b>SEWER</b>      |                           |            |
| -s-s-s-           | SANITARY SEWER            | -s-s-s-    |
| -s-s-s-           | MANHOLE                   | -s-s-s-    |
| -s-s-s-           | CLEANOUT                  | -s-s-s-    |
| -s-s-s-           | SEWER SERVICE             | -s-s-s-    |
| <b>WATER</b>      |                           |            |
| -w-w-w-           | WATER LINE                | -w-w-w-    |
| -w-w-w-           | VALVE                     | -w-w-w-    |
| -w-w-w-           | FIRE HYDRANT              | -w-w-w-    |
| -w-w-w-           | SERVICE                   | -w-w-w-    |
| -w-w-w-           | WATER METER               | -w-w-w-    |
| -w-w-w-           | BLOWOFF                   | -w-w-w-    |
| -w-w-w-           | AIR VACUUM RELIEF STATION | -w-w-w-    |
| <b>DRAINAGE</b>   |                           |            |
| -d-d-d-           | DRAINAGE LINE             | -d-d-d-    |
| -d-d-d-           | MANHOLE                   | -d-d-d-    |
| -d-d-d-           | DRYWELL                   | -d-d-d-    |
| -d-d-d-           | CATCH BASIN               | -d-d-d-    |
| -d-d-d-           | DITCH                     | -d-d-d-    |
| <b>GAS</b>        |                           |            |
| -g-g-g-           | GAS LINE                  | -g-g-g-    |
| -g-g-g-           | VALVE                     | -g-g-g-    |
| -g-g-g-           | METER                     | -g-g-g-    |
| <b>TELE-POWER</b> |                           |            |
| -bt-bt-bt-        | BURIED TELEPHONE          | -bt-bt-bt- |
| -bt-bt-bt-        | POWER OR TELEPHONE POLE   | -bt-bt-bt- |
| -bp-bp-bp-        | BURIED POWER              | -bp-bp-bp- |
| -bp-bp-bp-        | TRANSFORMER PAD           | -bp-bp-bp- |
| -bp-bp-bp-        | TELEPHONE RISER           | -bp-bp-bp- |
| -bp-bp-bp-        | TELEPHONE VAULT           | -bp-bp-bp- |
| -op-op-op-        | OVERHEAD POWER            | -op-op-op- |
| -op-op-op-        | GUY ANCHOR                | -op-op-op- |
| -op-op-op-        | POWER VAULT               | -op-op-op- |
| -op-op-op-        | LIGHT POLE                | -op-op-op- |

## ABBREVIATIONS

|           |                           |         |                        |           |                        |
|-----------|---------------------------|---------|------------------------|-----------|------------------------|
| ACT. LEN. | ACTUAL LENGTH             | GB      | GRADE BREAK            | PRC       | POINT OF REVERSE CURVE |
| BCR       | BEGINNING OF CURVE RADIUS | FT./FT. | FEET PER FOOT          | PT        | POINT OF TANGENCY      |
| BDRY.     | BOUNDARY                  | HYD.    | HYDRANT                | RIM EL.   | RIM ELEVATION          |
| CO.       | SEWER CLEANOUT            | I.E.    | INVERT ELEVATION       | RD        | ROAD                   |
| CSTC      | CRUSHED SURFACE           | LN.     | LANE                   | RT.       | RIGHT                  |
|           | TOP COURSE                | LT.     | LEFT                   | SI        | STREET INTERSECTION    |
| CT.       | COURT                     | MH      | MANHOLE                | SS        | SANITARY SEWER         |
| DIA.      | DIAMETER                  | MCR     | MIDDLE OF CURVE RADIUS | STA.      | STATION                |
| ECR       | END OF CURVE RADIUS       | PC      | POINT OF CURVATURE     | STA. LEN. | STATION LENGTH         |
| EXIST.    | EXISTING                  | PET.    | PETROLEUM              | TG        | TOP OF GRATE           |
| G         | GRADE                     | PI      | POINT OF INTERSECTION  | TC        | TOP OF CURB            |



SITE PLAN

SCALE: 1" = 100'

NOTE:  
 CONSTRUCTION OF EVERY DRYWELL AND INFILTRATION GALLERY, INCLUDING FABRIC AND DRAIN ROCK, SHALL BE OBSERVED BY THE ON-SITE INSPECTOR TO CONFIRM THAT THEY MEET THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS/GALLERIES NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.

## SHEET INDEX

|      |                                      |
|------|--------------------------------------|
| CO.0 | COVER SHEET                          |
| CO.1 | GENERAL NOTES                        |
| C1.0 | TOPOGRAPHIC SURVEY                   |
| C5.0 | HIGHWAY 27 TO TRIANGLE POND PIPE P&P |
| C5.1 | TRIANGLE POND PLAN                   |
| C9.0 | EROSION CONTROL/SWPPP PLAN           |
| C9.1 | SWPPP NOTES                          |
| C9.2 | SWPPP BMPs                           |
| C9.3 | SWPPP BMPs                           |

**PERMIT SPECIALIST**  
 SPOKANE COUNTY  
 1026 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 477-7151  
 CONTACT: ANGELA RUTH

**SEWER**  
 SPOKANE COUNTY UTILITIES  
 1026 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 477-7180  
 CONTACT: CHRIS KNUDSON

**STORM WATER**  
 SPOKANE COUNTY PUBLIC WORKS  
 1026 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 477-7444  
 CONTACT: BARRY GREENE, P.E.

**WATER**  
 SPOKANE COUNTY WATER DIST 3  
 1225 N. YARDLEY AVE.  
 SPOKANE, WASHINGTON 99212  
 PHONE: 536-0121  
 CONTACT: TY WICK

**FIRE**  
 SPOKANE VALLEY FIRE DEPT.  
 2120 NORTH WILBUR RD  
 SPOKANE VALLEY, WA 99206  
 PHONE: 928-1700  
 CONTACT: MIKE MAKELA

**ROADWAYS**  
 SPOKANE COUNTY ENGINEERS  
 1028 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 477-3600  
 CONTACT: BARRY GREENE, P.E.

**INSP. COUNTY**  
 I.P.E.C.  
 P. O. BOX 1566  
 VERADALE, WASHINGTON 99037  
 PHONE: 209-6262  
 CONTACT: PAUL T. NELSON, P.E.

**HEALTH**  
 SPOKANE REGIONAL HEALTH  
 1101 WEST COLLEGE AVE #402  
 SPOKANE, WASHINGTON 99260  
 PHONE: 324-1578  
 CONTACT: PAUL SAVAGE

**GAS - POWER**  
 AVISTA UTILITIES  
 1411 EAST MISSION AVENUE  
 SPOKANE, WA 99220  
 PHONE: 495-2991  
 CONTACT: MICHAEL TRUOX

**TELEPHONE**  
 CENTURY LINK  
 904 NORTH COLUMBUS  
 SPOKANE, WASHINGTON 99202  
 PHONE: 835-4804  
 CONTACT: MARK WELCH

**CABLE**  
 COMCAST BROADBAND  
 1717 EAST BUCKEYE  
 SPOKANE, WASHINGTON, 99207  
 PHONE: 755-4717  
 CONTACT: BRYAN RICHARDSON

**SURVEYOR**  
 WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD,  
 SPOKANE VALLEY, WA 99206  
 PHONE: 893-2617  
 CONTACT: JON GORDON, P.L.S.

**ENGINEERING**  
 WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD,  
 SPOKANE VALLEY, WA 99206  
 PHONE: 893-2617  
 CONTACT: TODD WHIPPLE, P.E.

**DEVELOPER**  
 BRYAN WALKER, NAI BLACK  
 107 SOUTH HOWARD #600  
 SPOKANE, WASHINGTON 99202  
 PHONE: 623-1000  
 CONTACT: BRYAN WALKER

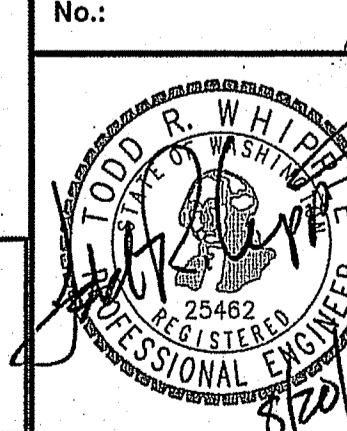
**PROPERTY OWNER**  
 TIMOTHY & JOANNE COMER  
 12908 EAST 39TH LANE  
 SPOKANE VALLEY, WA 99206

**PROPERTY OWNER**  
 BAR 4 BAR, INC.  
 P. O. BOX 867  
 VERADALE, WASHINGTON 99037

DEVELOPER APPROVAL \_\_\_\_\_ DATE \_\_\_\_\_

PLANS  
 NOT APPROVED  
 BY AGENCY

Spokane County Permit No.:



NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) - 2008.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | ORIGINAL PREPARATION | REVISIONS |
|-----|----------|-----|----------------------|-----------|
| A   | 08/03/16 | RMA |                      |           |

**SCALE:**  
 HORIZONTAL:  
 1" = 100'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 08/16/18  
 DRAWN: RMA  
 REVIEWED: TRW

|                                     |            |
|-------------------------------------|------------|
| <input checked="" type="checkbox"/> | CIVIL      |
| <input type="checkbox"/>            | STRUCTURAL |
| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD.  
 SPOKANE VALLEY, WA 99206  
 PH: 808-983-2617 FAX: 509-926-0227

**GUSTIN PIPE  
 COVER SHEET  
 40TH AVENUE  
 SPOKANE COUNTY, WA**

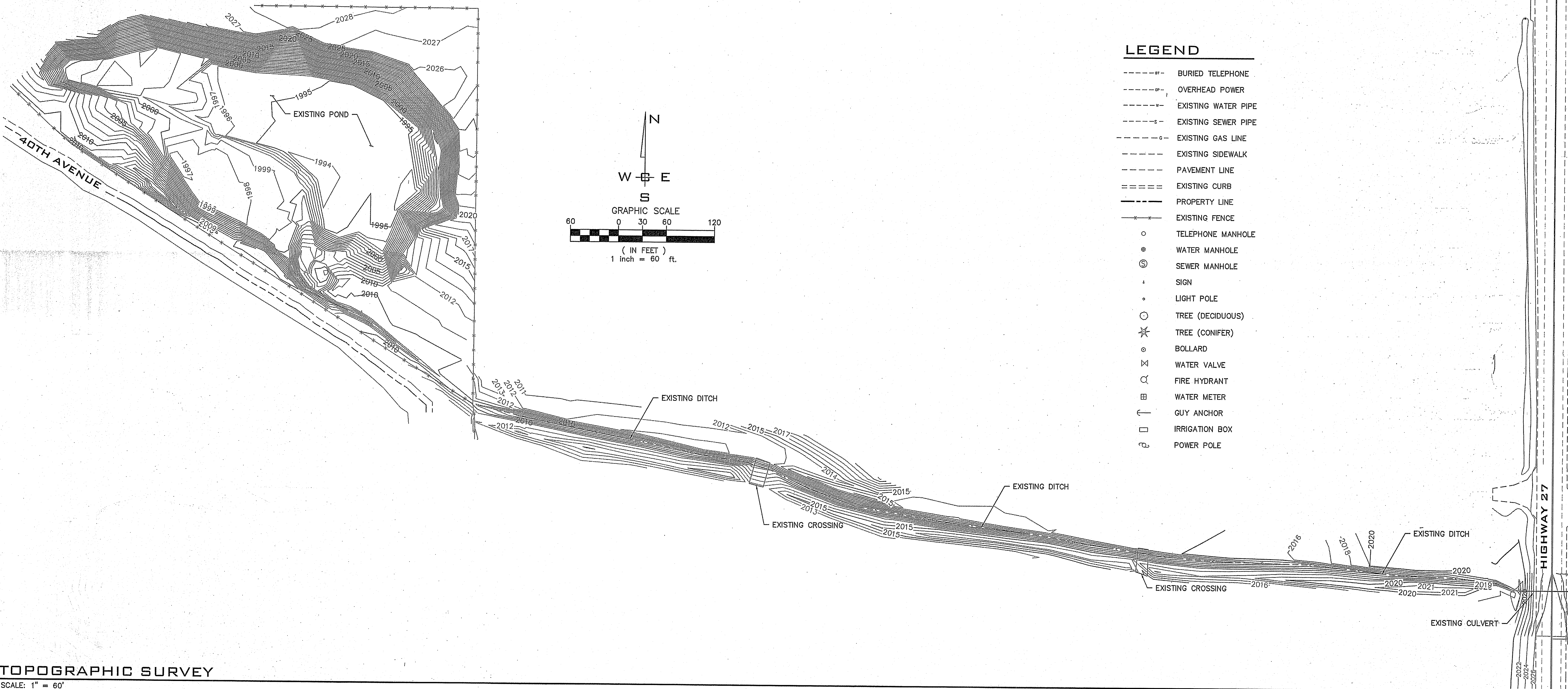
**SHEET  
 CO.0**  
 JOB NUMBER  
 13-1166





SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

UNDERGROUND SERVICE ALERT  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS  
 BEFORE YOU DIG



**LEGEND**

- BT----- BURIED TELEPHONE
- OP----- OVERHEAD POWER
- WP----- EXISTING WATER PIPE
- SP----- EXISTING SEWER PIPE
- GL----- EXISTING GAS LINE
- SS----- EXISTING SIDEWALK
- PL----- PAVEMENT LINE
- CL----- EXISTING CURB
- PL----- PROPERTY LINE
- FX----- EXISTING FENCE
- TELEPHONE MANHOLE
- WATER MANHOLE
- ⊙ SEWER MANHOLE
- SIGN
- LIGHT POLE
- TREE (DECIDUOUS)
- ★ TREE (CONIFER)
- ⊙ BOLLARD
- ⊗ WATER VALVE
- ⊗ FIRE HYDRANT
- ⊗ WATER METER
- ← GUY ANCHOR
- IRRIGATION BOX
- ⊕ POWER POLE

**TOPOGRAPHIC SURVEY**  
 SCALE: 1" = 60'

**SURVEYORS' NOTE:**  
 1. UTILITIES SHOWN HEREON ARE FROM VISIBLE SURFACE EVIDENCE COLLECTED BY SURVEY. INVESTIGATION INTO RECORDS HELD BY UTILITY PURVEYORS HAS NOT BEEN PERFORMED. LOCATES FOR UNDERGROUND UTILITIES WERE ORDERED AND ARE SHOWN ON THIS MAP.  
 2. SOME ITEMS MIGHT BE MISSING ON THIS MAP AND NOT LOCATED DUE TO THE FACT THAT IT WAS AN ACTIVE PARKING LOT.

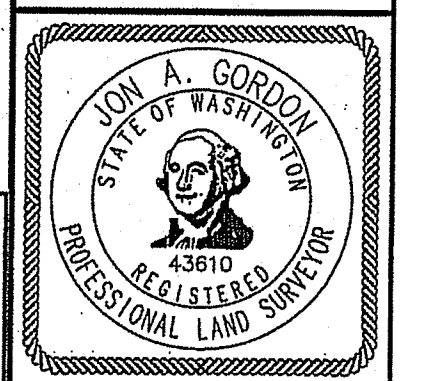
THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY PERFORMED BY ME, OR UNDER MY DIRECTION, IN AUGUST OF 2014 AT THE REQUEST OF BRIAN WALKER.  
 JON A. GORDON, P.L.S.  
 CERTIFICATE NO. 43610

08/03/16

**ABBREVIATIONS**

- |                                     |                                  |                                  |
|-------------------------------------|----------------------------------|----------------------------------|
| ACT. LEN. .... ACTUAL LENGTH        | GB ..... GRADE BREAK             | PRC ..... POINT OF REVERSE CURVE |
| BCR ..... BEGINNING OF CURVE RADIUS | FT./FT. .... FEET PER FOOT       | PT ..... POINT OF TANGENCY       |
| BDRY. .... BOUNDARY                 | HYD. .... HYDRANT                | RIM EL ..... RIM ELEVATION       |
| CO. .... SEWER CLEANOUT             | I.E. .... INVERT ELEVATION       | RD ..... ROAD                    |
| CSTC ..... CRUSHED SURFACE          | LN. .... LANE                    | RT. .... RIGHT                   |
| TOP COURSE                          | LT. .... LEFT                    | SI ..... STREET INTERSECTION     |
| CT. .... COURT                      | MH ..... MANHOLE                 | SS ..... SANITARY SEWER          |
| DIA. .... DIAMETER                  | MOR ..... MIDDLE OF CURVE RADIUS | STA. .... STATION                |
| ECR ..... END OF CURVE RADIUS       | PC ..... POINT OF CURVATURE      | STA. LEN. .... STATION LENGTH    |
| EXIST. .... EXISTING                | PET. .... PETROLEUM              | TG ..... TOP OF GRATE            |
| G ..... GRADE                       | PI ..... POINT OF INTERSECTION   | TC ..... TOP OF CURB             |

Spokane County Permit  
 No.:



FOR REFERENCE ONLY

PLANS  
 NOT APPROVED  
 BY AGENCY

NAVD - 88  
 TBM 8-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2035.87 (NAVD83) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| A   | 08/03/16 | RMA | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL:  
 1" = 60'  
 VERTICAL:  
 N/A

PROJ #: 13-1166  
 DATE: 08/16/18  
 DRAWN: RMA  
 REVIEWED: TRW

|                                     |            |
|-------------------------------------|------------|
| <input checked="" type="checkbox"/> | CIVIL      |
| <input type="checkbox"/>            | STRUCTURAL |
| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD.  
 SPOKANE VALLEY, WA 99206  
 PH: 509-893-2617 FAX: 509-826-0227

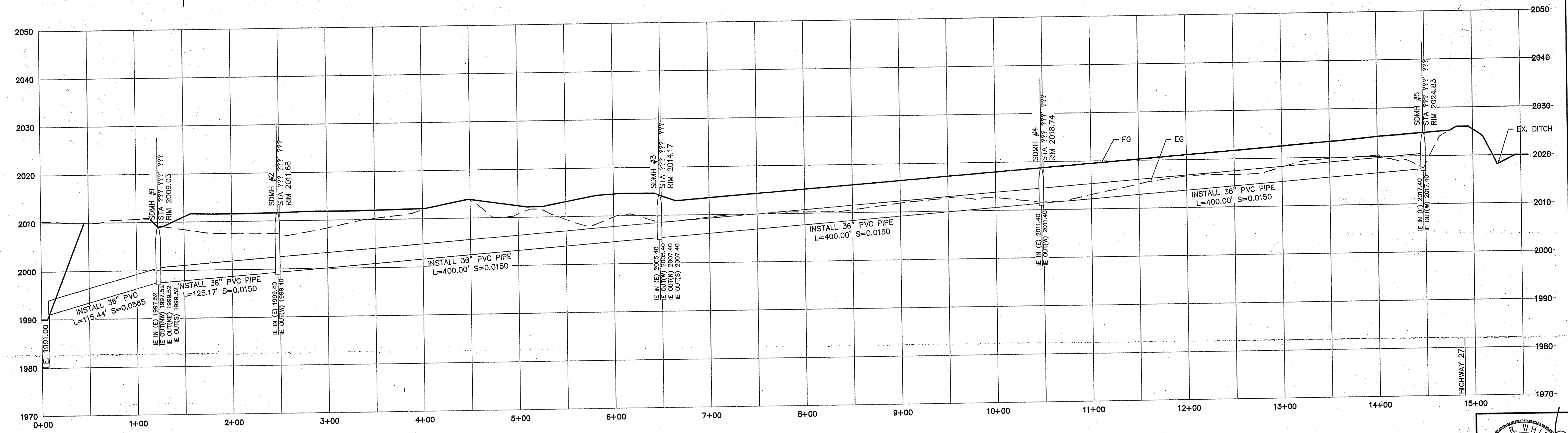
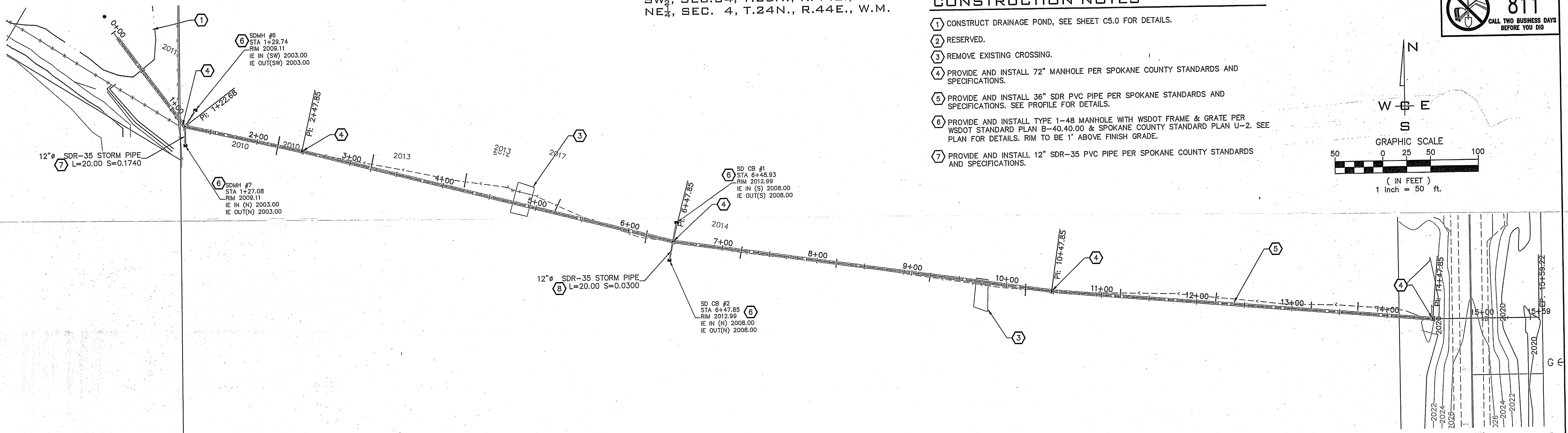
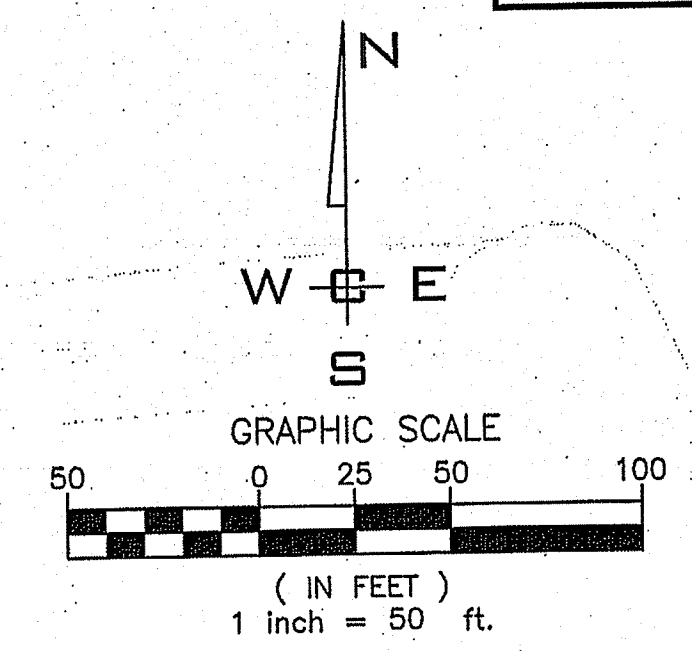
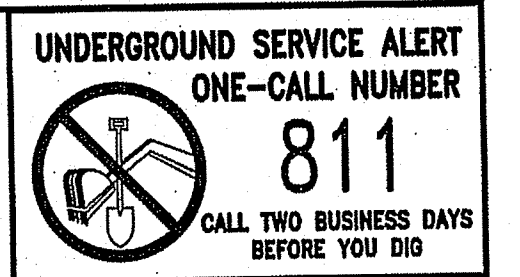
**GUSTIN PIPE**  
**TOPOGRAPHIC SURVEY (REF. ONLY)**  
**40TH AVENUE**  
**SPOKANE COUNTY, WA**

**SHEET**  
**C1.0**  
 JOB NUMBER  
**13-1166**

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

**CONSTRUCTION NOTES**

- 1 CONSTRUCT DRAINAGE POND, SEE SHEET C5.0 FOR DETAILS.
- 2 RESERVED.
- 3 REMOVE EXISTING CROSSING.
- 4 PROVIDE AND INSTALL 72" MANHOLE PER SPOKANE COUNTY STANDARDS AND SPECIFICATIONS.
- 5 PROVIDE AND INSTALL 36" SDR PVC PIPE PER SPOKANE STANDARDS AND SPECIFICATIONS. SEE PROFILE FOR DETAILS.
- 6 PROVIDE AND INSTALL TYPE 1-48 MANHOLE WITH WSDOT FRAME & GRATE PER WSDOT STANDARD PLAN B-40.40.00 & SPOKANE COUNTY STANDARD PLAN U-2. SEE PLAN FOR DETAILS. RIM TO BE 1' ABOVE FINISH GRADE.
- 7 PROVIDE AND INSTALL 12" SDR-35 PVC PIPE PER SPOKANE COUNTY STANDARDS AND SPECIFICATIONS.

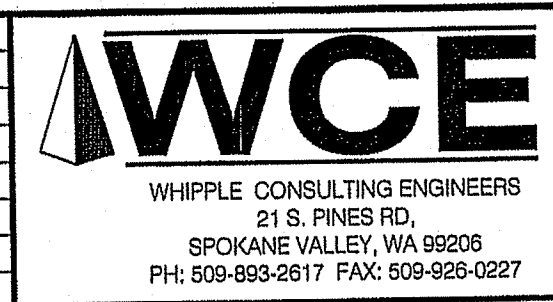


FOR FULL LEGEND  
SEE SHEET C0.0

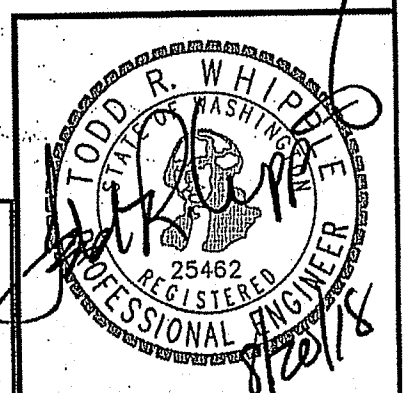
NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.67 (NAVD29)=2005.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS  
 MAP.

| SCALE:      |          | PROJ #:   | 13-1166              |
|-------------|----------|-----------|----------------------|
| HORIZONTAL: |          | DATE:     | 08/16/18             |
| 1" = 30'    |          | DRAWN:    | STT                  |
| VERTICAL:   |          | REVIEWED: | TRW                  |
| N/A         |          |           |                      |
| A           | 08/03/16 | RMA       | ORIGINAL PREPARATION |
| NO.         | DATE     | BY        | REVISIONS            |

|                                     |            |
|-------------------------------------|------------|
| <input checked="" type="checkbox"/> | CIVIL      |
| <input type="checkbox"/>            | STRUCTURAL |
| <input type="checkbox"/>            | SURVEYING  |
| <input type="checkbox"/>            | TRAFFIC    |
| <input type="checkbox"/>            | PLANNING   |
| <input type="checkbox"/>            | LANDSCAPE  |
| <input type="checkbox"/>            | OTHER      |



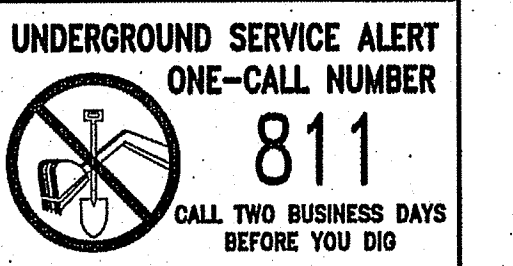
**GUSTIN PIPE**  
**HWY 27 TO TRIANGLE POND PIPE P&P**  
**40TH AVENUE**  
**SPOKANE COUNTY, WA**



PLANS  
NOT APPROVED  
BY AGENCY

**SHEET**  
C5.0  
**JOB NUMBER**  
13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**CONSTRUCTION NOTES**

- 1 CONSTRUCT DETENTION POND PER DETAILS, THIS SHEET.
- 2 PROVIDE AND INSTALL TYPE B DRYWELL PER SPOKANE COUNTY STANDARD PLAN B-1A. SET RIM ELEVATION 2 FEET ABOVE POND BOTTOM ELEVATION. INSTALL LOCKING GRATES ON DRYWELLS.
- 3 MATCH ACCESS ROAD TO EXISTING EDGE OF ASPHALT.
- 4 RESERVED.
- 5 PROVIDE AND INSTALL 15' WIDE MAINTENANCE ACCESS ROAD. 6" CSTC ON 95% COMPACTED SUBGRADE.
- 6 PROVIDE AND INSTALL 48" CMP CULVERT SEE SHEET 4.0 & 4.1. SEE DETAIL D FOR LENGTH AND SLOPE.
- 7 PROVIDE AND INSTALL 12"-24", D<sub>60</sub>-18" ROCK- RIP-RAP WITH A 10'-X-12' PAD 2 FT THICK. PLACE GEOTEXTILE UNDER ROCK.
- 8 SEED DRYLAND GRASS MIX. SEE NOTE A BELOW. IRRIGATE UNTIL ESTABLISHED.
- 9 SEED SWORD HARD FESCUE GRASS MIX. SEE NOTE B BELOW. IRRIGATE UNTIL ESTABLISHED.
- 10 INSTALL 12' DOUBLE SWING CHAINLINK GATE IN EXISTING FENCE.
- 11 PROVIDE AND INSTALL 12' WIDE MAINTENANCE ACCESS ROAD. 6" CSTC ON COMPACTED SUBGRADE.

**SEEDING NOTE:**

GRASS SEED: PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE OF PURITY AND GERMINATION ESTABLISHED BY THE OFFICIAL SEED ANALYSIS OF NORTH AMERICAN. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

- 10 PER CENT ELKA PERENNIAL RYE
- 20 PER CENT DURAR HARD FESCUE
- 45 PER CENT COVAR SHEEP/FESCUE
- 15 PER CENT REUBENS CANADIAN BLUEGRASS

PROVIDE MIXTURE COMPOSED OF GRASS SEED AND FERTILIZER IN PERCENTAGES AS FOLLOWS:

- GRASS SEED: 90 LBS. PER ACRE
- FERTILIZER: 16-16-16 TIMED RELEASE COMPOSITION, 300 LBS. PER ACRE

ALL SEEDING OF SLOPES SHALL BE DONE IN ACCORDANCE WITH THE W.S.D.O.T. STANDARD SPECIFICATIONS, SECTION 8-01.

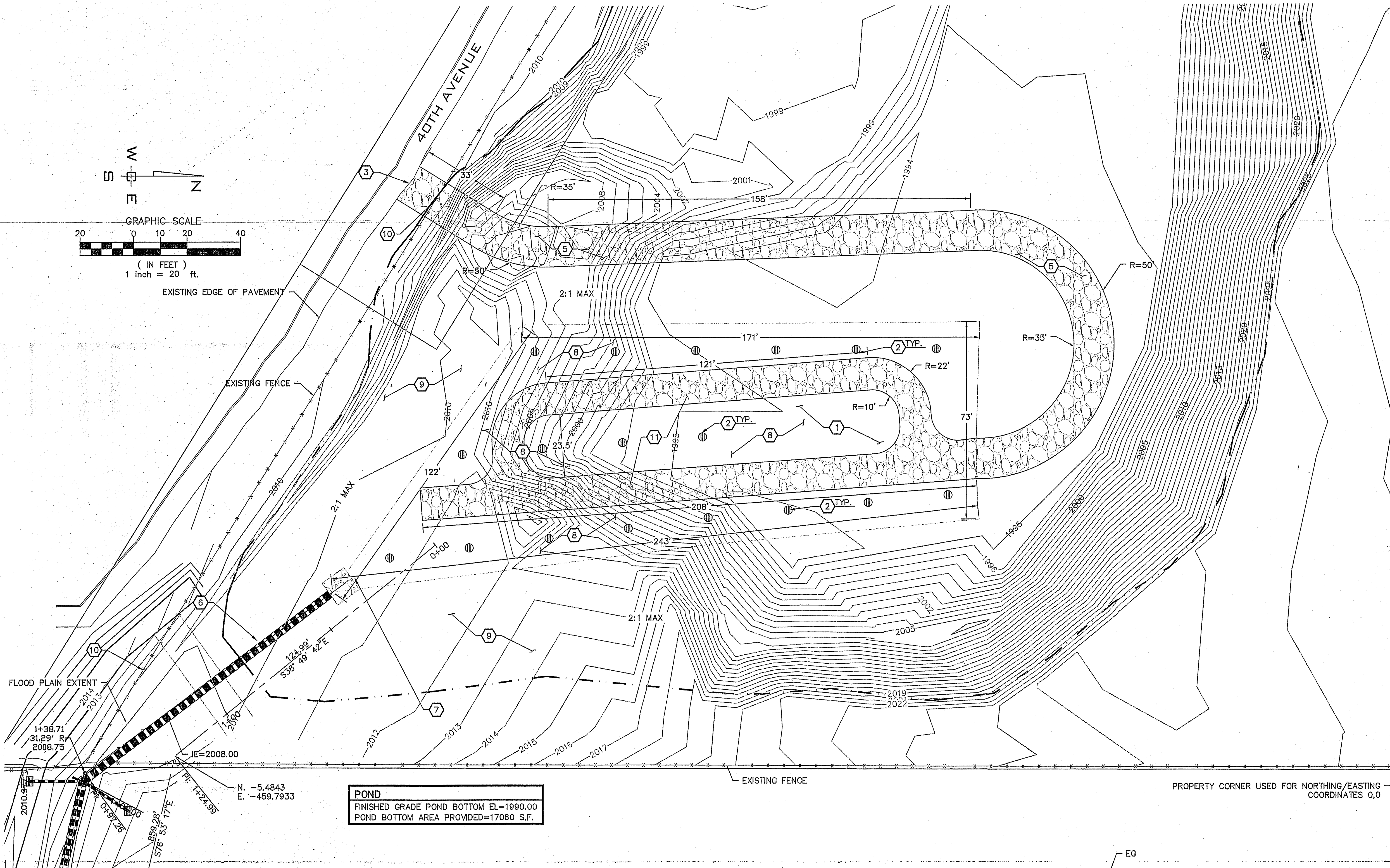
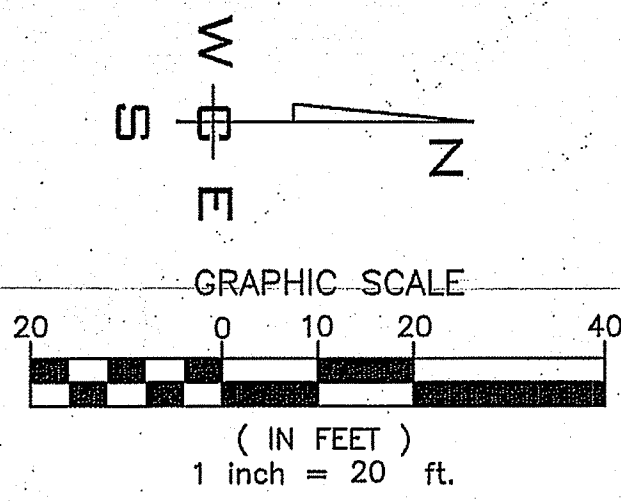
**SEEDING NOTE:**

GRASS SEED: PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE OF PURITY AND GERMINATION ESTABLISHED BY THE OFFICIAL SEED ANALYSIS OF NORTH AMERICAN. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

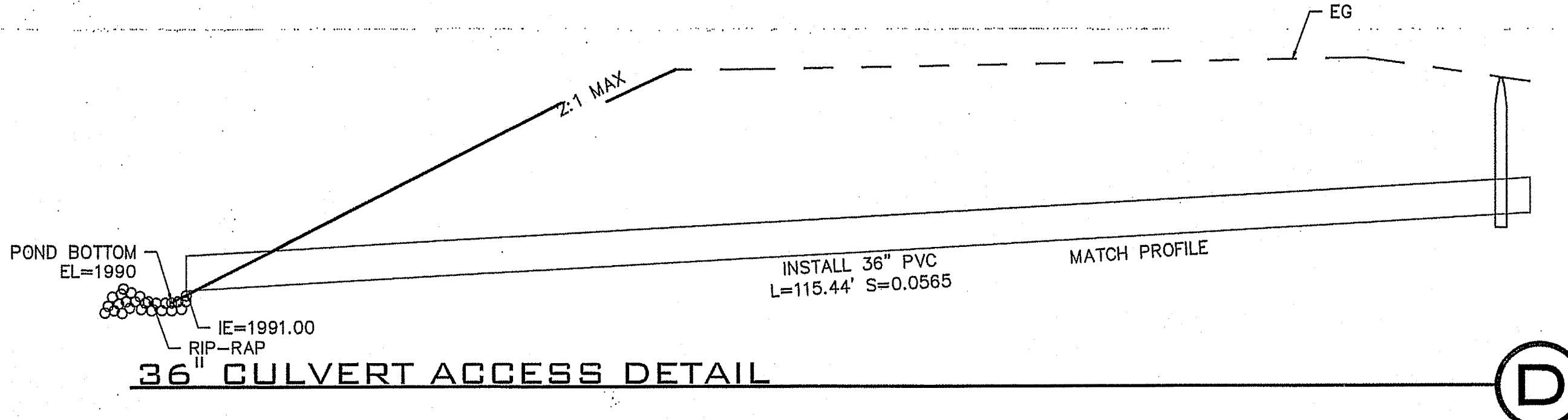
- GRASS SEED MIX: SWORD HARD FESCUE (FESTUCA LONGIFOLIA)

NEW SEEDING RATE: 2-4 LBS./1,000 SQ FT

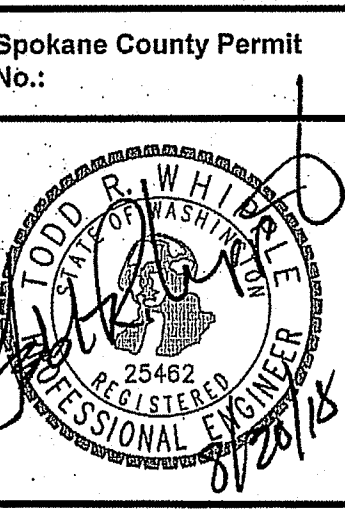
PROVIDER: LANDMARK TURF & NATIVE SEED PH: (509) 835-4967



**POND**  
 FINISHED GRADE POND BOTTOM EL=1990.00  
 POND BOTTOM AREA PROVIDED=17060 S.F.



**PLANS NOT APPROVED BY AGENCY**

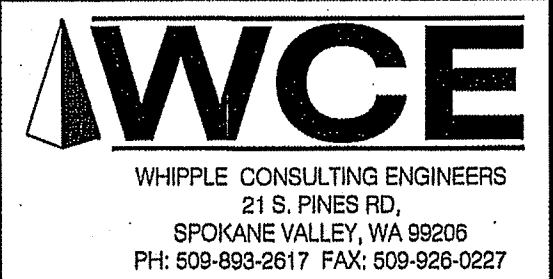


NAVD - 88  
 TBM S-6 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29) - 2008.87 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| A   | 08/03/18 | RMA | ORIGINAL PREPARATION |

**SCALE:**  
 HORIZONTAL: 1" = 20'  
 VERTICAL: N/A

PROJ #: 13-1166  
 DATE: 08/16/18  
 DRAWN: RMA  
 REVIEWED: TRW



**GUSTIN PIPE TRIANGLE POND DETAIL**  
**40TH AVENUE SPOKANE COUNTY, WA**

**SHEET C5.1**  
 JOB NUMBER 13-1166

**GENERAL NOTES**

- ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED SITE WORK STANDARDS AND THE STANDARDS AND SPECIFICATIONS SET FORTH IN SPOKANE COUNTY REGULATIONS AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK WITHIN PUBLIC R.O.W. OR EASEMENTS SHALL BE INSPECTED AND APPROVED BY SPOKANE COUNTY INSPECTOR. INSPECTION SERVICES AND CONSTRUCTION CERTIFICATION TO BE PROVIDED BY DESIGNEE OF PROJECT SPONSOR/OWNER.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY SPOKANE COUNTY INSPECTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.
- THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH SPOKANE COUNTY AND ALL UTILITY COMPANIES WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION, TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION, AND WITH A MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.
- THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND ONE (1) COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB ON-SITE AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO: EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
- IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED BY THE CONTRACTOR, HIS SUBCONTRACTORS, OR OTHER AFFECTED PARTIES WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
- ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
- FOR WORK AFFECTING PUBLIC ROADWAYS OR IF REQUIRED BY SPOKANE COUNTY, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL AND PHASING PLAN IN ACCORDANCE WITH M.U.T.C.D. FOR APPROVAL. PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN OR AFFECTING THE RIGHT-OF-WAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY SAID PLANS. PRIOR TO INSTALLATION, A RECONSTRUCTION CONFERENCE SHALL BE HELD WITH SPOKANE COUNTY.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED OR RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
- PER AGENCY STANDARDS THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING RECORD INFORMATION ON A SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE AND AVAILABLE TO SPOKANE COUNTY INSPECTOR AT ALL TIMES.
- DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. FOR ADDITIONAL INFORMATION CONTACT THE ENGINEER FOR CLARIFICATION AND NOTE ON THE RECORD DRAWINGS.
- ALL EROSION AND SEDIMENT CONTROL (E.S.C.) MEASURES SHALL BE INSTALLED AT THE LIMITS OF CONSTRUCTION PRIOR TO GROUND DISTURBING ACTIVITY. ALL E.S.C. MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BY THE CONTRACTOR UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.
- THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTORS SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN, AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.
- ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY IS SUBJECT TO THE JURISDICTION OF SPOKANE COUNTY ENGINEERING DEPARTMENT STANDARD DETAILS AND SPECIFICATIONS.
- ALL CONSTRUCTION OPERATIONS, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTH MOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED EQUIPMENT SHALL GENERALLY BE LIMITED TO THE TIME PERIOD APPROVED BY SPOKANE COUNTY.
- BASED ON REQUIREMENTS FROM SPOKANE COUNTY, THE ENGINEER OR HIS DESIGNEE SHALL PERFORM MATERIALS TESTING AND QUALITY CONTROL ON THE PROJECT AND SHALL SUBMIT COPIES OF DAILY REPORTS, TEST REPORTS, PROJECT CERTIFICATION AND RECORD DRAWINGS TO SPOKANE COUNTY ENGINEER.
- NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT APPROVAL OF SPOKANE COUNTY ENGINEERS AND NOTIFICATION OF THE ENGINEER OF RECORD.
- ON-SITE GRADING SHALL BE IN ACCORDANCE WITH THE APPROVED GRADING PLAN AND E.S.C. PLAN. ANY IMPORT OR EXPORT OF MATERIAL SHALL BE FROM AN APPROVED SOURCE/DESTINATION AND COORDINATED WITH SPOKANE COUNTY DEPARTMENT OF BUILDING AND PLANNING 509-477-3675. GRADING ON THIS SITE OR ANY OTHER SITE MUST COMPLY WITH ALL DEVELOPMENT REGULATIONS INCLUDING, BUT NOT LIMITED TO, GRADING PERMITS, S.E.P.A. REVIEW, TIMBER HARVEST PERMITS, CRITICAL AREAS, FLOOD PLAINS, DESIGNATED DRAINAGE WAYS, ETC.
- THE CONTRACTOR IS CAUTIONED THAT IT IS THE UNDERSTANDING OF THE OWNER AND THE ENGINEER THAT SHOULD A CONFLICT OR DISCREPANCY IN THESE PLANS, SPECIFICATIONS, GENERAL NOTES OR PLANS E.T.A.L. DETERMINED TO BE PART OF THE OVERALL PROJECT, INCLUDING BUT NOT LIMITED TO THE ARCHITECTURAL PLANS, MECHANICAL PLANS, ELECTRICAL PLANS, LANDSCAPE PLANS, GENERAL SPECIAL PROVISIONS, ETC., THAT WITHOUT WRITTEN CLARIFICATION FROM THE ENGINEER, OWNER OR OTHER PROFESSIONAL, DURING THE BIDDING PROCESS, THAT IN ALL INSTANCES THE CONTRACTOR WILL BE REQUIRED TO BID THE HIGHER STANDARD. FAILURE TO DO SO MAY RESULT IN THE HIGHER STANDARD BEING REQUIRED BY THE OWNER, ENGINEER OR OTHER PROFESSIONAL WITH NO CHANGE IN VALUE TO THE CONTRACT VIA CHANGE ORDER OR OTHER MECHANISM.
- CONSTRUCTION OF EVERY DRYWELL, INCLUDING FABRIC AND DRAINROCK, SHALL BE OBSERVED BY THE ON-SITE INSPECTOR TO CONFIRM THAT IT MEETS THE DESIGN DETAILS AND SPECIFICATIONS. DRYWELLS NOT OBSERVED SHALL HAVE THEIR PERFORMANCE VERIFIED BY A FULL-SCALE DRYWELL TEST.

NAVD - 88  
 TBM 9-5 OF THE SOUTH PONDEROSA SEWER PROJECT WITH AN ELEVATION OF 2005.87 (NAVD29)=2009.67 (NAVD89) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

SE 1/4, SEC. 33, T. 25 N., R. 44 E., W.M.  
 SW 1/4, SEC. 34, T. 25 N., R. 44 E., W.M.  
 NE 1/4, SEC. 4, T. 24 N., R. 44 E., W.M.

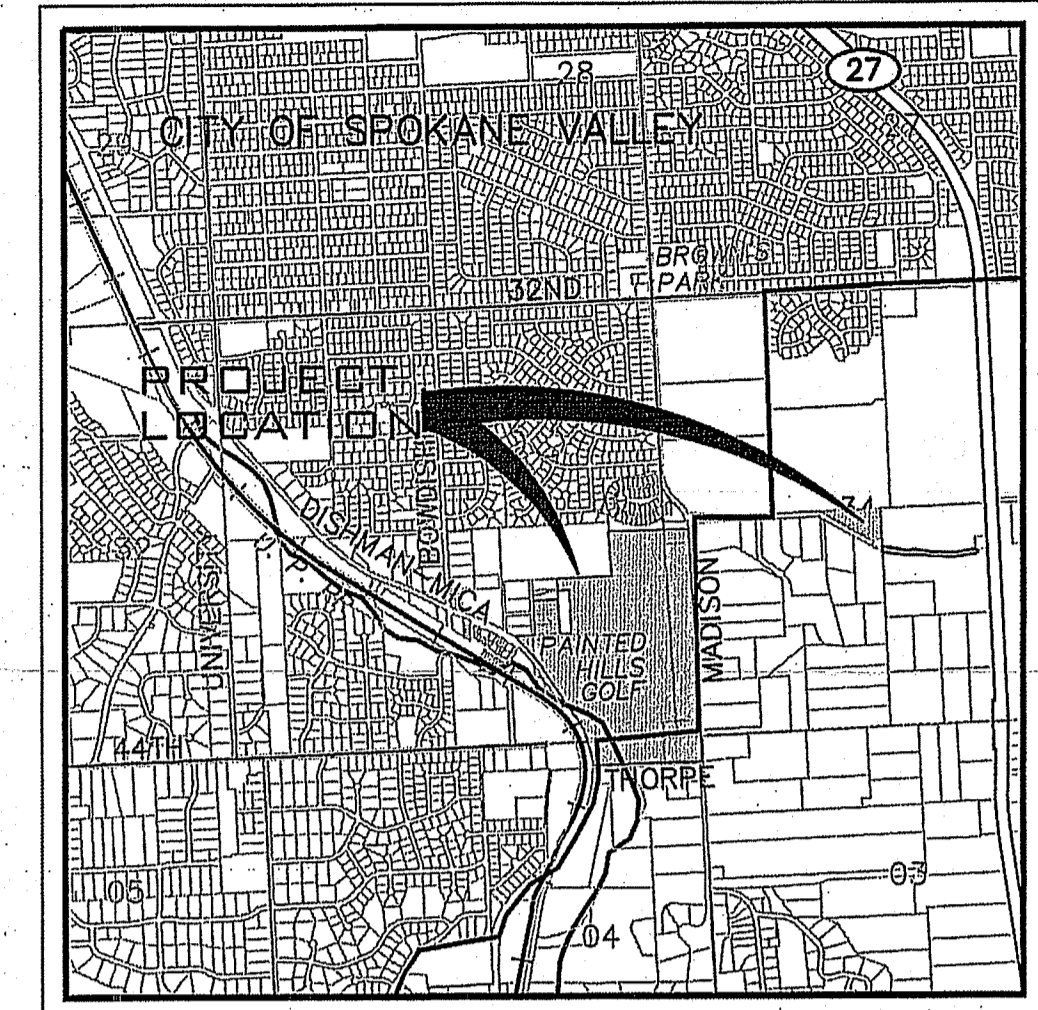
# SWPPP/EROSION CONTROL PLAN

## GUSTIN PIPE 40TH AVENUE

### SPOKANE COUNTY, WASHINGTON

#### SE 1/4 OF SEC. 33, T. 25 N., R. 44 E., W.M.

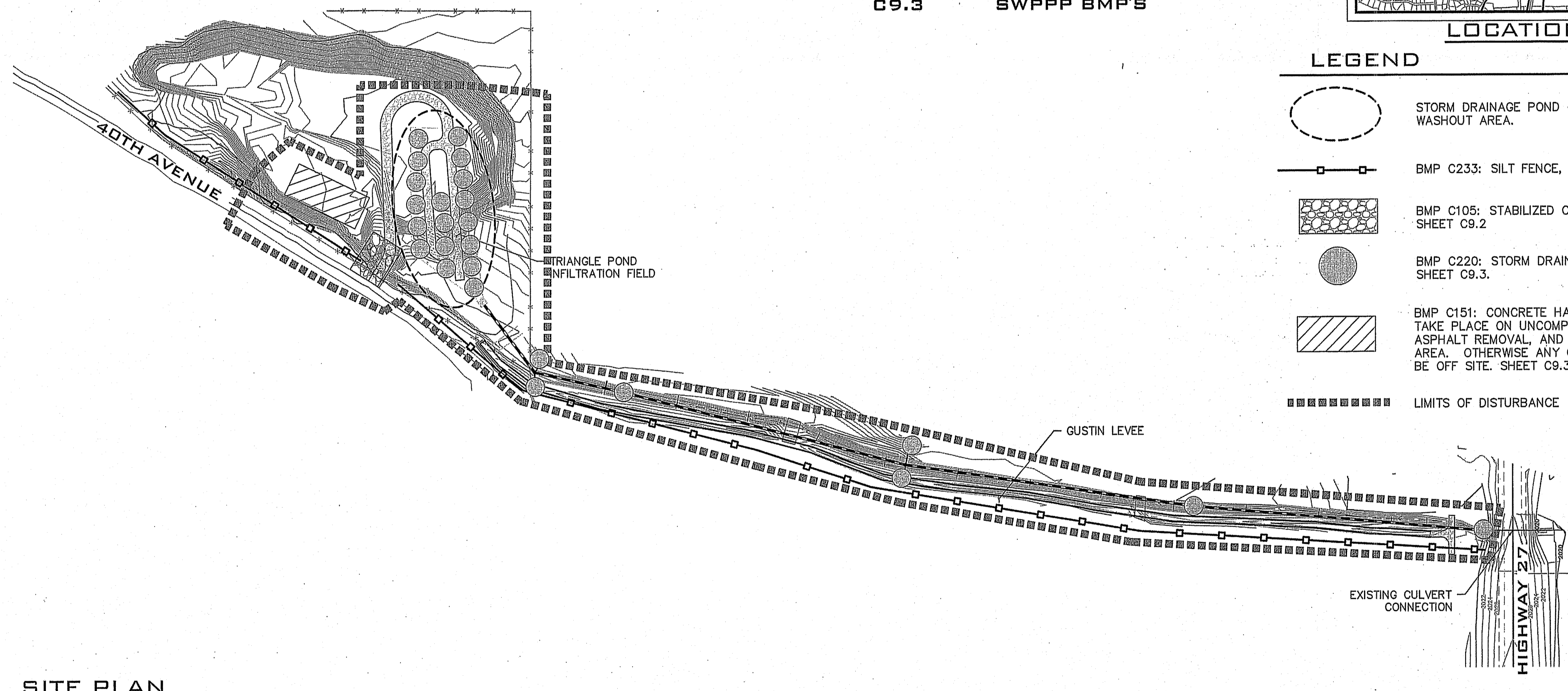
**UNDERGROUND SERVICE ALERT**  
**ONE-CALL NUMBER**  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG



LOCATION MAP

**INDEX TO PLAN SHEETS**

- C9.0 SWPPP/EROSION CONTROL COVER SHEET
- C9.1 SWPPP NOTES
- C9.2 SWPPP BMP'S
- C9.3 SWPPP BMP'S



**SITE PLAN**

SCALE: 1" = 100'

**LEGEND**

- STORM DRAINAGE POND - NO CONCRETE TRUCK WASHOUT AREA.
- BMP C233: SILT FENCE, SHEET C9.2.
- BMP C105: STABILIZED CONSTRUCTION ENTRY, SHEET C9.2
- BMP C220: STORM DRAIN INLET PROTECTION, SHEET C9.3.
- BMP C151: CONCRETE HANDLING - MAY ONLY TAKE PLACE ON UNCOMPACTED SUBGRADE AFTER ASPHALT REMOVAL, AND IN A NON-LANDSCAPED AREA. OTHERWISE ANY CONCRETE WASHOUT MUST BE OFF SITE. SHEET C9.3.
- LIMITS OF DISTURBANCE

**PERMIT SPECIALIST**

SPOKANE COUNTY  
 1026 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 477-7151  
 CONTACT: ANGELA RUTH

**ROADWAYS**

SPOKANE COUNTY ENGINEERS  
 1028 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 744-3600  
 CONTACT: MATT ZARECOR, P.E.

**CABLE**

COMCAST BROADBAND  
 1717 EAST BUCKEYE  
 SPOKANE, WASHINGTON, 99207  
 PHONE: 755-4717  
 CONTACT: BRYAN RICHARDSON

**SEWER**

SPOKANE COUNTY UTILITIES  
 1026 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 477-7180  
 CONTACT: CHRIS KNUDSON

**INSP. COUNTY**

I.P.E.C.  
 P. O. BOX 1566  
 VERADALE, WASHINGTON 99037  
 PHONE: 209-8262  
 CONTACT: PAUL T. NELSON, P.E.

**SURVEYOR**

WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD  
 SPOKANE VALLEY, WA 99206  
 PHONE: 893-2617  
 CONTACT: JON GORDON, P.L.S.

**STORM WATER**

SPOKANE COUNTY PUBLIC WORKS  
 1026 WEST BROADWAY AVENUE  
 SPOKANE, WASHINGTON 99260  
 PHONE: 477-7444  
 CONTACT: BARRY GREENE

**HEALTH**

SPOKANE REGIONAL HEALTH  
 1101 WEST COLLEGE AVE #402  
 SPOKANE, WASHINGTON 99260  
 PHONE: 324-1578  
 CONTACT: PAUL SAVAGE

**ENGINEERING**

WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD  
 SPOKANE VALLEY, WA 99206  
 PHONE: 893-2617  
 CONTACT: TODD WHIPPLE, P.E.

**WATER**

SPOKANE COUNTY WATER DIST 3  
 1225 N. YARDLEY AVE.  
 SPOKANE, WASHINGTON 99212  
 PHONE: 536-0121  
 CONTACT: TY WICK

**GAS - POWER**

AVISTA UTILITIES  
 1411 EAST MISSION AVENUE  
 SPOKANE, WA 99220  
 PHONE: 495-2387  
 CONTACT: JOHN LUSE

**DEVELOPER**

BRYAN WALKER, NAI BLACK  
 107 SOUTH HOWARD #600  
 SPOKANE, WASHINGTON 99202  
 PHONE: 623-1000  
 CONTACT: BRYAN WALKER

**FIRE**

SPOKANE VALLEY FIRE DEPT.  
 2120 NORTH WILBUR RD  
 SPOKANE VALLEY, WA 99206  
 PHONE: 928-1700  
 CONTACT: MIKE MAKELA

**TELEPHONE**

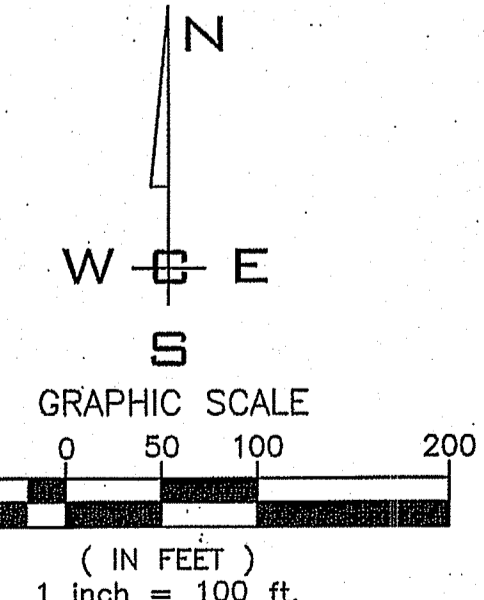
CENTURY LINK  
 904 NORTH COLUMBUS  
 SPOKANE, WASHINGTON 99202  
 PHONE: 835-4604  
 CONTACT: MARK WELCH

**OWNER**

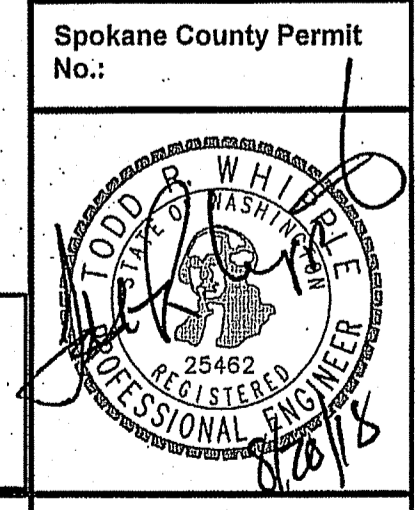
TIMOTHY & JOANNE COMER  
 12908 EAST 39TH LANE  
 SPOKANE VALLEY, WA 99206

**OWNER**

BAR 4 BAR, INC.  
 P. O. BOX 867  
 VERADALE, WASHINGTON 99037



**PLANS NOT APPROVED BY AGENCY**



|               |                          |
|---------------|--------------------------|
| <b>SCALE:</b> |                          |
| HORIZONTAL:   | 1" = 100'                |
| VERTICAL:     | N/A                      |
| NO. DATE      | BY                       |
| A 08/03/16    | RMA ORIGINAL PREPARATION |
|               | REVISIONS                |

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| PROJ #:   | 13-1166  |
| DATE:     | 08/16/18 |
| DRAWN:    | RMA      |
| REVIEWED: | TRW      |

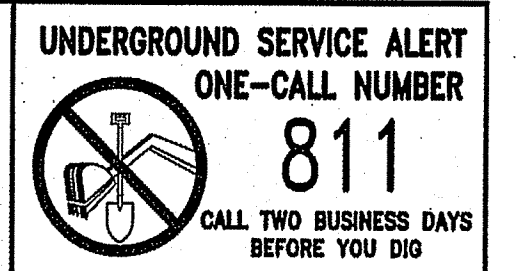
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| <input type="checkbox"/> SURVEYING        |
| <input type="checkbox"/> TRAFFIC          |
| <input type="checkbox"/> PLANNING         |
| <input type="checkbox"/> LANDSCAPE        |
| <input type="checkbox"/> OTHER            |

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD.  
 SPOKANE VALLEY, WA 99206  
 PH: 893-2617 FAX: 509-926-0227

**GUSTIN PIPE  
 SWPPP COVER  
 40TH AVENUE  
 SPOKANE COUNTY, WA**

|              |                |
|--------------|----------------|
| <b>SHEET</b> | <b>C9.0</b>    |
| JOB NUMBER   | <b>13-1166</b> |

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**EROSION & SEDIMENT CONTROL**  
**GENERAL NOTES AND INFORMATION**

1. AN EROSION/SEDIMENT CONTROL (E.S.C.) PLAN IS REQUIRED FOR THIS PROJECT. IMPLEMENTATION OF THE E.S.C. PLAN, AND CONSTRUCTION, MAINTENANCE, AND UPGRADING OF THE E.S.C. FACILITIES ARE THE RESPONSIBILITY OF THE DEVELOPER UNTIL ALL CONSTRUCTION IS COMPLETED AND ACCEPTED BY SPOKANE COUNTY, OR UNTIL VEGETATION IS ESTABLISHED THROUGHOUT THE SITE, AND ACCEPTED BY SPOKANE COUNTY, WHICHEVER IS LATER.
2. APPROVAL OF THE E.S.C. PLAN DOES NOT CONSTITUTE APPROVAL OF ANY OF THE PROPOSED ROAD, STORM DRAINAGE, GRADING OR UTILITY DESIGN ELEMENTS SHOWN ON THE E.S.C. PLAN.
3. THE EROSION/SEDIMENT CONTROL MEASURES SHOWN ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. THE CONTRACTOR SHALL INSPECT AND MAINTAIN THESE E.S.C. MEASURES DAILY, AND SHALL MAINTAIN AND UPGRADE THESE MEASURES AS NECESSARY TO PREVENT SEDIMENT-LADEN WATER FROM EITHER FLOWING OFF SITE, OR INTO NEW/EXISTING STORM DRAINAGE FACILITIES, SUCH AS DRYWELLS, CULVERTS, OR GRAVEL GALLERIES.
4. GEOTEXTILE FABRIC IS TO BE PLACED ON THE RIMS, CATCH BASINS AND INLETS UNTIL SUCH TIME THAT THE VEGETATION ON THE SITE IS ESTABLISHED AND THE THREAT OF SEDIMENT DEPOSITION INTO THE DRAINAGE SYSTEM IS MITIGATED.
5. THE SILT FENCES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO OTHER SITE WORK, AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ROCK CONSTRUCTION ENTRIES AT ANY AND ALL LOCATIONS USED TO ENTER OR EXIT THE PROJECT SITE. SEE DETAIL.
7. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNATING A LOCATION WHERE CONCRETE TRUCKS AND EQUIPMENT CAN BE WASHED OUT, NOT LOCATED NEAR OR DRAINING INTO A STORM DRAINAGE AREA.
8. PROPERTY OWNER: TIMOTHY P & JOANNE M COMER, BAR 4 BAR (GUSTIN)  
 PERMIT APPLICANT: WHIPPLE CONSULTING ENGINEERS, INC. 509-893-2617  
 CONTACT PERSON ON SITE: TBD
9. PROJECT LOCATION: NORTH OF 40TH AVENUE, IN SPOKANE COUNTY, WASHINGTON, IN SECTION 33, TOWNSHIP 25 N., RANGE 44 E. W.M.
10. PROJECT DESCRIPTION: IMPROVEMENT OF 5 ACRES +/- OF AN EXISTING POND & DRAINAGE DITCH.
11. DESCRIPTION OF E.S.C. MEASURES: USE OF SILT FENCES AND SEDIMENTATION FILTERS. ALL E.S.C. MEASURES MENTIONED ABOVE ARE TEMPORARY AND WILL BE REMOVED AFTER SITE IS LANDSCAPED.
12. EXISTING VEGETATION: VACANT LAND WITH GRASS AND WEED COVER.
13. PLAN PREPARATION DATE: AUGUST 2016
14. SOILS: ALLUVIAL LEAN CLAY, SILT, OR SILTY SAND.
15. STABILIZATION OF DENUDED AREAS:  
 ANY DISTURBED AREAS, WHICH WOULD BE LEFT BARE FOR MORE THAN 7 DAYS AND ARE NOT INTENDED TO BE REWORKED WITHIN 30-45 DAYS SHALL BE SEEDED WITH A FAST STARTING NATIVE DRYLAND GRASS SUCH AS ANNUAL RYE, OR APPROVED EQUAL, AT A RATE OF 60 LBS./ACRE.
16. CONTROL OF POLLUTANTS:  
 ANY SPILLS WILL BE HANDLED ACCORDING TO D.O.E. AND D.O.H. GUIDELINES.
17. LIMITS OF GRADING:  
 DURING THE COURSE OF CONSTRUCTION, THE AMOUNT OF DISTURBED AREA SHALL BE KEPT TO A MINIMUM AND SHALL BE LIMITED TO THE AREA SHOWN AS "LIMITS OF GRADING" ON THIS SHEET OF THE EROSION CONTROL PLANS.

**MAINTENANCE**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF THE TEMPORARY E.S.C. MEASURES.
2. SEDIMENT BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RUNOFF-PRODUCING RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
3. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF FILTER FABRIC SHALL BE ACCOMPLISHED PROMPTLY.
4. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RUNOFF-PRODUCING RAINFALL. DEPOSITS MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
5. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE E.S.C. STRUCTURE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
6. ALL TEMPORARY AND PERMANENT E.S.C. PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
7. ALL TEMPORARY E.S.C. MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DIRT, MUD AND OTHER CONSTRUCTION DEBRIS WHICH MAY ACCUMULATE ON PAVED STREETS ADJACENT TO THE SITE AS A RESULT OF CONSTRUCTION ACTIVITY. CLEANING SHALL BE ON AN "AS NEEDED" BASIS USING SWEEPING AND WATER TO WASH THE CONSTRUCTION DEBRIS FROM THE STREET.
9. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY USING WATER. APPLICATIONS OF WATER MAY BE REQUIRED SEVERAL TIMES PER DAY DURING CONSTRUCTION ACTIVITY.

**E.S.C. STANDARD PLAN NOTES FROM APPENDIX 9A OF THE SPOKANE REGIONAL STORMWATER MANUAL**

1. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED IN ORDER TO BEST MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENTATION CONTROL PROBLEMS.
  - (A) CLEAR AND GRUB SUFFICIENTLY FOR INSTALL OF TEMPORARY E.S.C. BMP'S;
  - (B) INSTALL TEMPORARY E.S.C. BMP'S, CONSTRUCTING SEDIMENT TRAPPING BMP'S AS ONE OF THE FIRST STEPS PRIOR TO GRADING;
  - (C) CLEAR, GRUB AND ROUGH GRADE FOR ROADS, TEMPORARY ACCESS POINTS AND UTILITY LOCATIONS;
  - (D) STABILIZE ROADWAY APPROACHES AND TEMPORARY ACCESS POINTS WITH THE APPROPRIATE CONSTRUCTION ENTRY BMP;
  - (E) CLEAR, GRUB AND GRADE INDIVIDUAL LOTS OR GROUPS OF LOTS;
  - (F) TEMPORARILY STABILIZE, THROUGH RE-VEGETATION OR OTHER APPROPRIATE BMP'S, LOTS OR GROUPS OF LOTS IN SITUATIONS WHERE SUBSTANTIAL CUT OR FILL SLOPES ARE A RESULT OF THE SITE GRADING;
  - (G) CONSTRUCT ROADS, BUILDINGS, PERMANENT STORMWATER FACILITIES. (I.E. INLETS, PONDS, U.I.C.FACILITIES, ETC.);
  - (H) PROTECT ALL PERMANENT STORMWATER FACILITIES UTILIZING THE APPROPRIATE BMP'S;
  - (I) INSTALL PERMANENT E.S.C. CONTROLS, WHEN APPLICABLE; AND,
  - (J) REMOVE TEMPORARY E.S.C. CONTROLS WHEN;
2. PERMANENT E.S.C. CONTROLS, WHEN APPLICABLE, HAVE BEEN COMPLETELY INSTALLED;
3. ALL LAND-DISTURBING ACTIVITIES THAT HAVE THE POTENTIAL TO CAUSE EROSION AND SEDIMENTATION PROBLEMS HAVE CEASED; AND,
4. VEGETATION HAD BEEN ESTABLISHED IN THE AREAS NOTED AS REQUIRING VEGETATION ON THE ACCEPTED E.S.C. PLAN ON FILE WITH THE LOCAL JURISDICTION.
5. INSPECT ALL ROADWAYS, AT THE END OF EACH DAY, ADJACENT TO THE CONSTRUCTION ACCESS ROUTE. IF IT IS EVIDENT THAT SEDIMENT HAS BEEN TRACKED OFF SITE AND/OR BEYOND THE ROADWAY APPROACH, CLEANING IS REQUIRED.
6. IF SEDIMENT REMOVAL IS NECESSARY PRIOR TO STREET WASHING, IT SHALL BE REMOVED BY SHOVELING OR PICKUP SWEEPING AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
7. IF STREET WASHING IS REQUIRED TO CLEAN SEDIMENT TRACKED OFF SITE, ONCE SEDIMENT HAS BEEN REMOVED, STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON-SITE OR OTHERWISE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.
8. RESTORE CONSTRUCTION ACCESS ROUTE EQUAL TO OR BETTER THAN THE PRE-CONSTRUCTION CONDITION.
9. RETAIN THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION IN AND UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICAL.
10. INSPECT SEDIMENT CONTROL BMP'S WEEKLY AT A MINIMUM, DAILY DURING A STORM EVENT, AND AFTER ANY DISCHARGE FROM THE SITE (STORMWATER OR NON-STORMWATER). THE INSPECTION FREQUENCY MAY BE REDUCED TO ONCE A MONTH IF THE SITE IS STABILIZED AND INACTIVE.
11. CONTROL FUGITIVE DUST FROM CONSTRUCTION ACTIVITY IN ACCORDANCE WITH THE STATE AND/OR LOCAL AIR QUALITY CONTROL AUTHORITIES WITH JURISDICTION OVER THE PROJECT AREA.
12. STABILIZE EXPOSED UNWORKED SOILS (INCLUDING STOCKPILES), WHETHER AT FINAL GRADE OR NOT WITHIN 10 DAYS DURING THE REGIONAL DRY SEASON (JULY 1 TO SEPTEMBER 30) AND WITHIN 5 DAYS DURING THE REGIONAL WET SEASON (OCTOBER 1 THRU JUNE 30). SOILS MUST BE STABILIZED AT THE END OF A SHIFT BEFORE A HOLIDAY WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. THE TIME LIMIT MAY ONLY BE ADJUSTED BY A LOCAL JURISDICTION WITH A "QUALIFIED LOCAL PROGRAM," IF IT CAN BE DEMONSTRATED THAT THE RECENT PRECIPITATION JUSTIFIES A DIFFERENT STANDARD AND MEETS THE REQUIREMENTS SET FORTH IN THE CONSTRUCTION STORMWATER GENERAL PERMIT.
13. PROTECT INLETS, DRYWELLS, CATCH BASINS AND OTHER STORMWATER MANAGEMENT FACILITIES FROM SEDIMENT, WHETHER OR NOT FACILITIES ARE OPERABLE,
14. KEEP ROADS ADJACENT TO INLETS CLEAN.
15. INSPECT INLETS WEEKLY AT A MINIMUM AND DAILY FOR STORM EVENTS.
16. CONSTRUCT STORMWATER CONTROL FACILITIES (DETENTION/RETENTION STORAGE POND OR SWALES) BEFORE GRADING BEGINS. THESE FACILITIES SHALL BE OPERABLE BEFORE THE CONSTRUCTION OF IMPERVIOUS SITE IMPROVEMENTS.
17. STOCKPILE MATERIALS (SUCH AS TOPSOIL) ON SITE, KEEPING OFF OF ROADWAY AND SIDEWALKS.
18. COVER, CONTAIN AND PROTECT ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCT, AND NON-INERT WASTES PRESENT ON SITE FROM VANDALISM (SEE CHAPTER 173-304 W.A.C. FOR THE DEFINITION OF INERT WASTE), USE SECONDARY CONTAINMENT FOR ON-SITE FUELING TANKS.
19. CONDUCT MAINTENANCE AND REPAIR OF HEAVY EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEMS REPAIRS, SOLVENT AND DEGREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL AND OTHER ACTIVITIES THAT MAY RESULT IN DISCHARGE OR SPILLAGE OF POLLUTANTS TO THE GROUND OR INTO STORMWATER RUNOFF USING SPILL RECONVENTION MEASURES, SUCH AS DRIP PANS, CLEAN ALL CONTAMINATED SURFACES IMMEDIATELY FOLLOWING ANY DISCHARGE OR SPILL INCIDENT. IF RAINING OVER EQUIPMENT OR VEHICLE, PERFORM EMERGENCY REPAIRS ON SITE USING TEMPORARY PLASTIC BENEATH THE VEHICLE.
20. CONDUCT APPLICATION OF AGRICULTURAL CHEMICALS, INCLUDING FERTILIZERS AND PESTICIDES, IN SUCH A MANNER, AND AT APPLICATION RATES, THAT INHIBITS THE LOSS OF CHEMICALS INTO STORMWATER RUNOFF FACILITIES. AMEND MANUFACTURER'S RECOMMENDED APPLICATION RATES AND PROCEDURES TO MEET THIS REQUIREMENT, IF NECESSARY.
21. INSPECT ON A REGULAR BASIS (AT A MINIMUM WEEKLY, AND DAILY DURING/AFTER A RUNOFF PRODUCING EVENT) AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMP'S TO ENSURE SUCCESSFUL PERFORMANCE OF THE BMP'S. NOTE THAT INLET PROTECTION DEVICES SHALL BE CLEANED OR REMOVED AND REPLACE BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE.
22. REMOVE TEMPORARY E.S.C. BMP'S WITHIN 30 DAYS AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. PERMANENTLY STABILIZE AREA THAT ARE DISTURBED DURING REMOVAL PROCESS.

**SRCAA GENERAL NOTES**

1. DUST EMISSIONS DURING DEMOLITION, CONSTRUCTION, AND EXCAVATION PROJECTS MUST BE CONTROLLED. THIS MAY REQUIRE THE USE OF WATER SPRAYS, TARPS, SPRINKLERS, OR SUSPENSION OF ACTIVITY DURING CERTAIN WEATHER CONDITIONS.
2. MEASURES MUST BE TAKEN TO AVOID THE DEPOSITION OF DIRT AND MUD FROM UNPAVED SURFACES ONTO PAVED SURFACES. IF TRACKING OR SPILLS OCCUR ON PAVED SURFACES, MEASURES MUST BE TAKEN IMMEDIATELY TO CLEAN THESE SURFACES.
3. DEBRIS GENERATED, AS A RESULT OF THIS PROJECT, MUST BE DISPOSED OF BY MEANS OTHER THAN BURNING (I.E., CONSTRUCTION WASTE, VEGETATIVE WASTE, ECT.).
4. SPOKANE CLEAN AIR (SRCAA) STRONGLY RECOMMENDS THAT ALL TRAVELED SURFACES (I.E., INGRESS, EGRESS, PARKING AREAS, ACCESS ROADS, ECT.) BE PAVED AND KEPT CLEAN TO MINIMIZE DUST EMISSIONS.
5. IF OBJECTIONABLE ODORS RESULT FROM THIS PROJECT, EFFECTIVE CONTROL APPARATUS AND MEASURES MUST BE TAKEN TO REDUCE ODORS TO A MINIMUM.
6. SPECIAL ATTENTION SHOULD BE GIVEN TO PROPER MAINTENANCE OF DIESEL POWERED CONSTRUCTION EQUIPMENT TO REDUCE THE IMPACT OF DIESEL EXHAUST, A SUSPECTED CARCINOGEN.
7. A NOTICE OF CONSTRUCTION AND APPLICATION FOR APPROVAL IS REQUIRED TO BE SUBMITTED AND APPROVED BY SRCAA PRIOR TO THE CONSTRUCTION, INSTALLATION, OR ESTABLISHMENT OF AN AIR POLLUTION SOURCE. THIS INCLUDES EMERGENCY GENERATORS RATED AT 500 HP(375 KW) OR HIGHER, NATURAL GAS HEATING EQUIPMENT UNITS RATED AT FOUR MMBTU/HOUR OR HIGHER (INPUT), AND HEATING EQUIPMENT UNITS FIRED WITH OTHER FUELS (E.G., DIESEL) RATED AT ONE MMBTU/HOUR (INPUT) OR HIGHER. CONTACT SPOKANE CLEAN AIR (SRCAA) FOR A NOTICE OF CONSTRUCTION APPLICATION.
8. NOTICE OF INTENT MUST BE SUBMITTED TO SRCAA PRIOR TO ANY DEMOLITION PROJECT OR ASBESTOS PROJECT. AN ASBESTOS SURVEY MUST BE DONE BY AN HERA-ACCREDITED BUILDING INSPECTOR PRIOR TO THE DEMOLITION OR RENOVATION OF BUILDINGS TO DETERMINE IF ASBESTOS-CONTAINING MATERIAL IS PRESENT AT THE SITE. CONTACT SPOKANE CLEAN AIR (SRCAA) FOR A NOTICE OF INTENT APPLICATION.

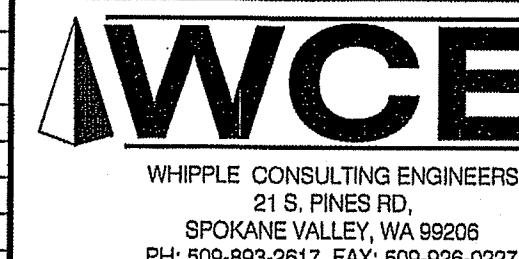
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| NO. | DATE     | BY  | REVISIONS            |  |

**SCALE:**  
 HORIZONTAL: N/A  
 VERTICAL: N/A

PROJ #: 13-1166  
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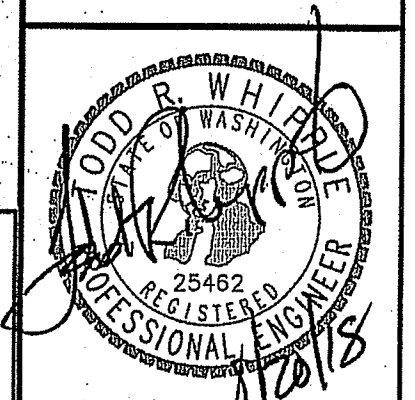
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**GUSTIN PIPE SWPPP NOTES**  
**40TH AVENUE SPOKANE COUNTY, WA**

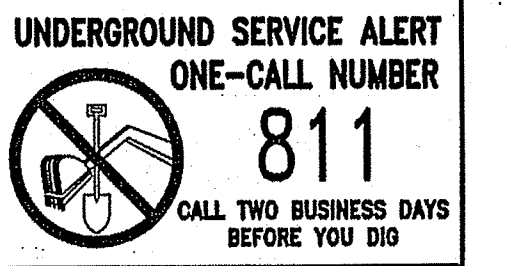
PLANS NOT APPROVED BY AGENCY

Spokane County Permit No.:



**SHEET C9.1**  
 JOB NUMBER 13-1166

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.



**BMP C233: SILT FENCE**

INFORMATION TAKEN FROM CHAPTER 7 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL 2004 EDITION

**PURPOSE:** USE OF SILT FENCE REDUCES THE TRANSPORT OF COARSE SEDIMENT FROM A CONSTRUCTION SITE BY PROVIDING A TEMPORARY PHYSICAL BARRIER TO SEDIMENT AND REDUCING THE RUNOFF VELOCITIES OF OVERLAND FLOW. SEE FIGURE 7.3.20 OF THE EASTERN WASHINGTON STORMWATER MANUAL OR DETAIL BELOW FOR DETAILS ON SILT FENCE CONSTRUCTION.

**CONDITIONS OF USE:** SILT FENCE MAY BE USED DOWNSLOPE OF ALL DISTURBED AREAS. SILT FENCE IS NOT INTENDED TO TREAT CONCENTRATED FLOWS, NOR IS IT INTENDED TO TREAT SUBSTANTIAL AMOUNTS OF OVERLAND FLOW. ANY CONCENTRATED FLOWS MUST BE CONVEYED THROUGH THE DRAINAGE SYSTEM TO A SEDIMENT POND. THE ONLY CIRCUMSTANCE IN WHICH OVERLAND FLOW CAN BE TREATED SOLELY BY A SILT FENCE, RATHER THAN BY A SEDIMENT POND, IS WHEN THE AREA DRAINING TO THE FENCE IS ONE ACRE OR LESS AND FLOW RATES ARE LESS THAN 0.5 CFS.

SILT FENCES SHOULD NOT BE CONSTRUCTED IN STREAMS OR USED IN V-SHAPED DITCHES. THEY ARE NOT AN ADEQUATE METHOD OF SILT CONTROL FOR ANYTHING DEEPER THAN SHEET OR OVERLAND FLOW.

**DESIGN AND INSTALLATION:** DRAINAGE AREA OF 1 ACRE OR LESS OR IN COMBINATION WITH SEDIMENT BASIN IN A LARGER SITE.

MAXIMUM-SLOPE STEEPNESS (NORMAL OR PERPENDICULAR TO FENCE LINE) 1:1.

MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE FENCE OF 100 FEET.

NO FLOWS GREATER THAN 0.5 CFS.

THE GEOTEXTILE USED SHALL MEET THE FOLLOWING STANDARDS. ALL GEOTEXTILE PROPERTIES LISTED BELOW ARE MINIMUM AVERAGE ROLL VALUES.

|                                      |   |
|--------------------------------------|---|
| POLYMERIC MESH AOS (ASTM D4751)      | 0.60MM MAX. FOR SLIT WOVENS (#30 SIEVE), 0.30MM MAX. FOR ALL OTHER GEOTEXTILE TYPES (#50 SIEVE), 0.15MM MAX. FOR ALL FABRIC TYPES (#100 SIEVE). |
| WATER PERMITTIVITY (ASTM D4491)      | 180 LBS. MIN. FOR EXTRA STRENGTH FABRIC.  |
| GRAB TENSILE STRENGTH (ASTM D4632)   | 100 LBS. MIN. FOR STANDARD STRENGTH FABRIC  |
| GRAB TENSILE ELONGATION (ASTM D4632) | 30% MAX.  |
| ULTRAVIOLET RESISTANCE (ASTM D4335)  | 70% MIN.  |

STANDARD STRENGTH FABRICS SHALL BE SUPPORTED WITH WIRE MESH, CHICKEN WIRE, 2-INCH X 2-INCH, SAFETY FENCE, OR JUST MESH TO INCREASE THE STRENGTH OF FABRIC. SILT FENCE MATERIALS ARE AVAILABLE THAT HAVE SYNTHETIC MESH BACKING ATTACHED.

FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0°F. TO 120°F.

100 PERCENT BIODEGRADABLE SILT FENCE IS AVAILABLE THAT IS STRONG, LONG LASTING, AND CAN BE LEFT IN PLACE AFTER THE PROJECT IS COMPLETED, IF PERMITTED BY LOCAL REGULATIONS.

CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY SILT FENCES AT THE LOCATIONS SHOWN IN THE PLANS. THE SILT FENCE SHALL BE CONSTRUCTED IN THE AREAS OF CLEARING, GRADING, OR DRAINAGE PRIOR TO STARTING THOSE ACTIVITIES. A SILT FENCE SHALL NOT BE CONSIDERED TEMPORARY IF THE SILT FENCE MUST OPERATE BEYOND THE LENGTH OF THE CONTRACT. THE SILT FENCE SHALL PREVENT SOIL CARRIED BY RUNOFF WATER FROM GOING BENEATH, THROUGH, OR OVER THE TOP OF THE SILT FENCE, BUT SHALL ALLOW WATER TO PASS THROUGH THE FENCE.

THE MINIMUM HEIGHT OF THE TOP OF SILT FENCE SHALL BE 2 FEET AND THE MAXIMUM SHALL BE 2.5 FEET ABOVE THE ORIGINAL GROUND SURFACE.

**DESIGN AND INSTALLATION:** (CONTINUED)

THE GEOTEXTILE SHALL BE SEWN TOGETHER AT THE POINT OF MANUFACTURE, OR AT AN APPROVED LOCATION AS DETERMINED BY THE ENGINEER, TO FORM GEOTEXTILE LENGTHS AS REQUIRED. ALL SEWN SEAMS SHALL BE LOCATED AT A SUPPORT POST. ALTERNATIVELY, TWO SECTIONS OF SILT FENCE CAN BE OVERLAPPED, PROVIDED THE CONTRACTOR CAN DEMONSTRATE, TO THE SATISFACTION OF THE ENGINEER, THAT THE OVERLAP IS LONG ENOUGH AND THAT THE ADJACENT FENCE SECTIONS ARE CLOSE ENOUGH TOGETHER TO PREVENT SILT LOADED WATER FROM ESCAPING THROUGH THE FENCE AT THE OVERLAP.

THE GEOTEXTILE SHALL BE ATTACHED ON THE UP-SLOPE SIDE OF THE POSTS AND SUPPORT SYSTEM WITH STAPLES, WIRE, OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE GEOTEXTILE SHALL BE ATTACHED IN A MANNER THAT REDUCES THE POTENTIAL FOR GEOTEXTILE TEARING AT THE STAPLES, WIRE, OR OTHER CONNECTION DEVICE. SILT FENCE BACKUP SUPPORT FOR THE GEOTEXTILE IN THE FORM OF A WIRE OF PLASTIC MESH IS DEPENDENT ON THE PROPERTIES OF THE GEOTEXTILE SELECTED FOR USE. IF WIRE OR PLASTIC BACK-UP MESH IS USED, THE MESH SHALL BE FASTENED SECURELY TO THE UP-SLOPE OF THE POSTS WITH THE GEOTEXTILE BEING UP-SLOPE OF THE MESH BACK SUPPORT.

THE GEOTEXTILE AT THE BOTTOM OF THE FENCE SHALL BE BURIED IN A TRENCH TO A MINIMUM DEPTH OF 4" BELOW THE GROUND SURFACE. THE TRENCH SHALL BE BACKFILLED AND THE SOIL TAMPED IN PLACE OVER THE BURIED PORTION OF THE GEOTEXTILE, SUCH THAT NO FLOW CAN PASS BENEATH THE FENCE AND SCOURING CAN NOT OCCUR. WHEN WIRE OR POLYMERIC BACK-UP SUPPORT MESH IS USED, THE WIRE OR POLYMERIC MESH SHALL EXTEND INTO THE TRENCH A MINIMUM OF 3".

THE FENCE POSTS SHALL BE PLACED OR DRIVEN A MIN. OF 18". A MIN. DEPTH OF 12" IS ALLOWED IF TOPSOIL OR OTHER SOFT SUBGRADE SOIL IS NOT PRESENT AND A MIN. DEPTH OF 18" CANNOT BE REACHED. FENCE POST DEPTHS SHALL BE INCREASED 6" IF THE FENCE IS LOCATED ON SLOPES OF 3:1 OR STEEPER AND THE SLOPE IS PERPENDICULAR TO THE FENCE. IF REQUIRED POST DEPTHS CANNOT BE OBTAINED, THE POSTS SHALL BE ADEQUATELY SECURED BY BRACING OR GUYING TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT LOADING.

SILT FENCES SHALL BE LOCATED ON CONTOUR AS MUCH AS POSSIBLE, EXCEPT AT THE ENDS OF THE FENCE, WHERE THE FENCE SHALL BE TURNED UPHILL SUCH THAT THE SILT FENCE CAPTURES THE RUNOFF WATER AND PREVENTS WATER FROM FLOWING AROUND THE END OF THE FENCE.

IF THE FENCE MUST CROSS CONTOURS, WITH THE EXCEPTION OF THE END OF THE FENCE, GRAVEL CHECK DAMS PLACED PERPENDICULAR TO THE BACK OF THE FENCE SHALL BE USED TO MINIMIZE CONCENTRATED FLOW AND EROSION ALONG THE BACK OF THE FENCE. THE GRAVEL CHECK DAMS SHALL BE APPROXIMATELY 1' DEEP AT THE BACK OF THE FENCE. IT SHALL BE CONTINUED PERPENDICULAR TO THE FENCE AT THE SAME ELEVATION UNTIL THE TOP OF THE CHECK DAM INTERCEPTS THE GROUND SURFACE BEHIND THE FENCE. THE GRAVEL CHECK DAMS SHALL CONSIST OF CRUSHED SURFACING TOP COURSE, GRAVEL, BACKFILL FOR WALLS, OR SHOULDER BALLAST. THE GRAVEL CHECK DAMS SHALL BE LOCATED EVERY 10' ALONG THE FENCE WHERE THE FENCE MUST CROSS THE CONTOURS. THE SLOPE OF THE FENCE LINE WHERE THE CONTOURS MUST BE CROSSED SHALL NOT BE STEEPER THAN 3:1

WOOD, STEEL OR EQUIVALENT POSTS SHALL BE USED. WOOD POSTS SHALL HAVE MINIMUM DIMENSIONS OF 2"x2"x3" MIN. LENGTH, AND SHALL BE FREE OF DEFECTS SUCH AS KNOTS, SPLITS, OR GOUGES. STEEL POSTS SHALL CONSIST OF EITHER SIZE NO. 6 REBAR OR LARGER, ASTM A 120 STEEL PIPE WITH A MIN. DIAMETER, OR 1-INCH, U, T, L, OR C SHAPE STEEL POSTS WITH A MIN. WEIGHT OF 1.35 LBS./FT. OR OTHER STEEL POSTS HAVING EQUIVALENT STRENGTH AND BENDING RESISTANCE TO THE POST SIZES LISTED. THE SPACING OF THE SUPPORTS POSTS SHALL BE A MAXIMUM OF 6'.

FENCE BACK-UP SUPPORT, IF USED, SHALL CONSIST OF STEEL WIRE WITH A MAX. MESH SPACING OF 2", OR A PREFABRICATED POLYMERIC MESH. THE STRENGTH OF WIRE OR POLYMERIC MESH SHALL BE EQUIVALENT TO OR GREATER THAN 180 LBS. GRAB TENSILE STRENGTH. THE POLYMERIC MESH MUST BE AS RESISTANT TO ULTRAVIOLET RADIATION AS THE GEOTEXTILE IT SUPPORTS.

SILT FENCE INSTALLATION USING THE SLICING METHOD SPECIFICATION DETAILS FOLLOW.

THE BASE OF BOTH END POSTS MUST BE AT LEAST 2-4" ABOVE THE TOP OF THE SILT FENCE FABRIC ON THE MIDDLE POSTS FOR DITCH CHECKS TO DRAIN PROPERLY. USE A HAND LEVEL OR STRING LEVEL, IF NECESSARY, TO MARK BASE POINTS BEFORE INSTALLATION.

INSTALL POSTS 3-4' APART IN CRITICAL RETENTION AREAS, AND 6-7' APART IN STANDARD APPLICATIONS.

INSTALL POSTS 24" DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC. ENABLING POSTS TO SUPPORT THE FABRIC FROM THE UPSTREAM WATER PRESSURE.

INSTALL POSTS WITH NIPPLES FACING AWAY FROM THE SILT FENCE FABRIC.

ATTACH THE FABRIC TO EACH POST WITH THREE TIES, ALL SPACED WITH THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1 INCH VERTICALLY APART. IN ADDITION, EACH TIE SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENING TO PREVENT SAGGING.

WRAP APPROXIMATELY 6 INCHES OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.

NO MORE THAN 24" OF A 36" FABRIC IS ALLOWED ABOVE GROUND LEVEL.

THE ROPE LOCK SYSTEM MUST BE USED IN ALL DITCH CHECK APPLICATIONS.

THE INSTALLATION SHOULD BE CHECKED AND CORRECTED FOR ANY DEVIATION BEFORE COMPACTION. USE A FLAT-BLADED SHOVEL TO TUCK FABRIC DEEPER INTO THE GROUND IF NECESSARY.

COMPACTION IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE WITH THE FRONT WHEEL OF A TRACTOR, SKID STEER, OR ROLLER EXERTING 60 PSI, COMPACT THE UPSTREAM SIDE FIRST AND THEN EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS

ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.

IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT POND.

IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF THE FLOWS PARALLEL TO THE FENCE, IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.

SEDIMENT DEPOSITS SHALL EITHER BE REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-THIRD THE HEIGHT OF THE SILT FENCE, OR A SECOND SILT FENCE INSTALLED.

IF THE FILTER FABRIC OR GEOTEXTILE HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

**BMP C105: STABILIZED CONSTRUCTION ENTRANCE**

INFORMATION TAKEN FROM CHAPTER 7 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL 2004 EDITION

**PURPOSE:** CONSTRUCTION ENTRANCES ARE STABILIZED TO REDUCE THE AMOUNT OF SEDIMENT TRANSPORTED ONTO PAVED ROADS BY VEHICLES OR EQUIPMENT BY CONSTRUCTING A STABILIZED PAD OF QUARRY SPALLS AT ENTRANCES TO CONSTRUCTION SITES.

**CONDITIONS OF USE:** CONSTRUCTION ENTRANCES SHALL BE STABILIZED WHEREVER TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND TRAVELING ON PAVED ROADS OR OTHER PAVED AREAS WITHIN 1,000 FEET OF THE SITE.

ON LARGE COMMERCIAL, HIGHWAY, AND ROAD PROJECTS, THE DESIGNER AND OR CONTRACTOR SHOULD INCLUDE ENOUGH MATERIALS IN THE CONTRACT TO ALLOW FOR ADDITIONAL STABILIZED ENTRANCES NOT SHOWN IN THE INITIAL CONSTRUCTION SWPPP. IT IS DIFFICULT TO DETERMINE EXACTLY WHERE ACCESS TO THESE PROJECTS WILL TAKE PLACE; ADDITIONAL MATERIALS WILL ENABLE THE CONTRACTOR TO INSTALL THEM WHERE NEEDED.

**DESIGN AND INSTALLATION:** SEE FIGURE 7.3.2 OF THE EASTERN WATER STORMWATER MANAGEMENT MANUAL OR DETAIL BELOW.

THE SURFACE MATERIAL SHALL BE 4"-8" QUARRY SPALLS. SMALLER CRUSHED ROCK SUCH AS BASE COURSE MAY BE APPROPRIATE IN SOME SITUATIONS BUT, SINCE IT IS MORE LIKELY TO BE TRACKED OFF-SITE, MUST BE APPROVED BY THE LOCAL JURISDICTION.

A SEPARATION GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENT FROM PUMPING UP INTO THE ROCK PAD. THE GEOTEXTILE SHALL MEET THE FOLLOWING STANDARDS:

|  |                                  |
|--|----------------------------------|
| GRAB TENSILE STRENGTH (ASTM D4751)     | 200 PSI MIN.                     |
| GRAB TENSILE ELONGATION (ASTM D4632)   | 30% MAX.                         |
| MULLEN BURST STRENGTH (ASTM D3786-80A) | 400 PSI MIN.                     |
| AOS (ASTM D4751)                       | 20-45 (U.S. STANDARD SIEVE SIZE) |

IF SITE CONDITIONS DO NOT WARRANT THE USE OF GEOTEXTILE, IT IS NOT REQUIRED.

**MAINTENANCE STANDARDS:** IF QUARRY SPALLS (OR HOG FUEL) SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.

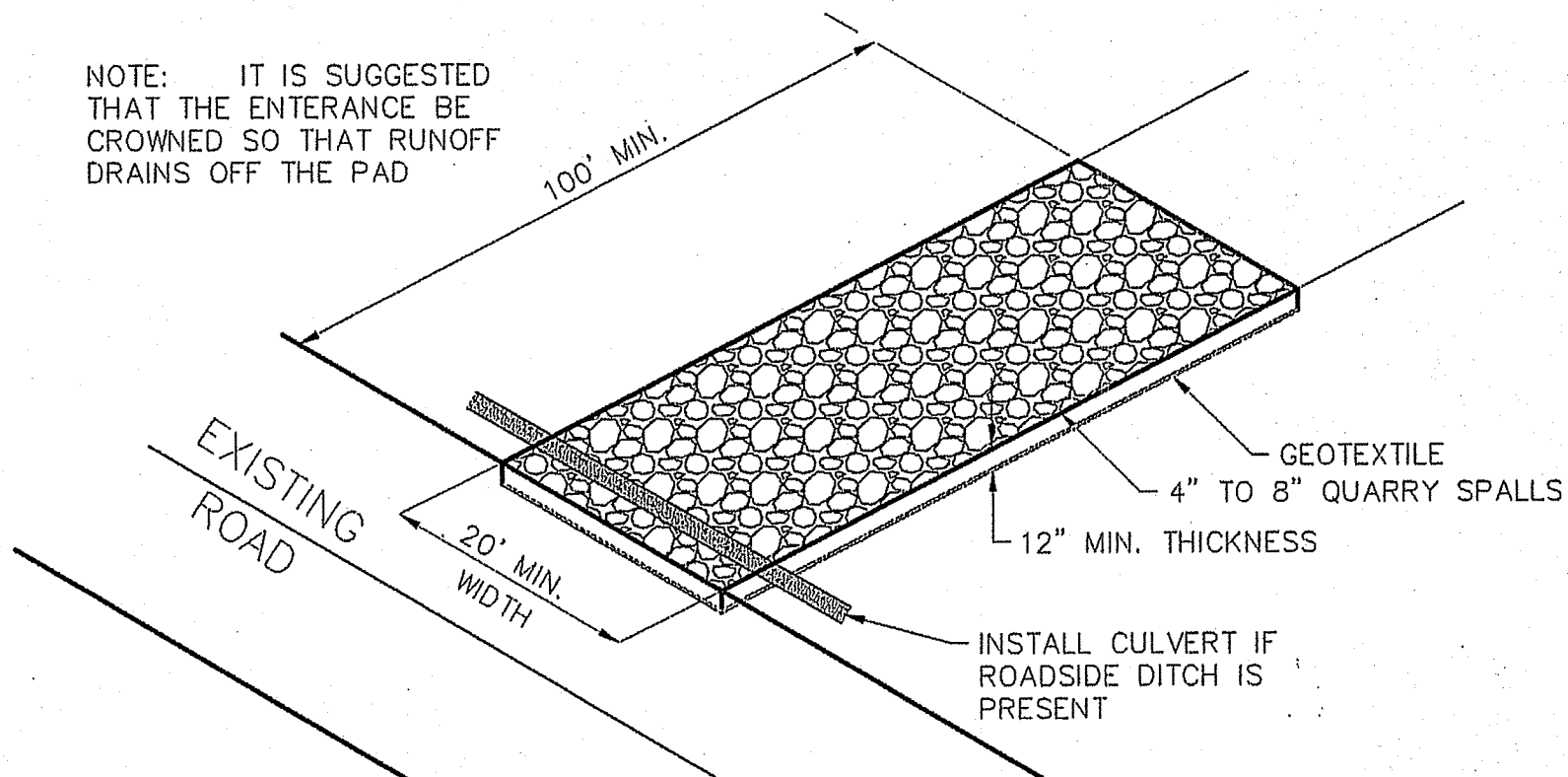
IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH.

ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED BY SHOVELING OR STREET SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREETS, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP WHERE IT CAN BE CONTROLLED.

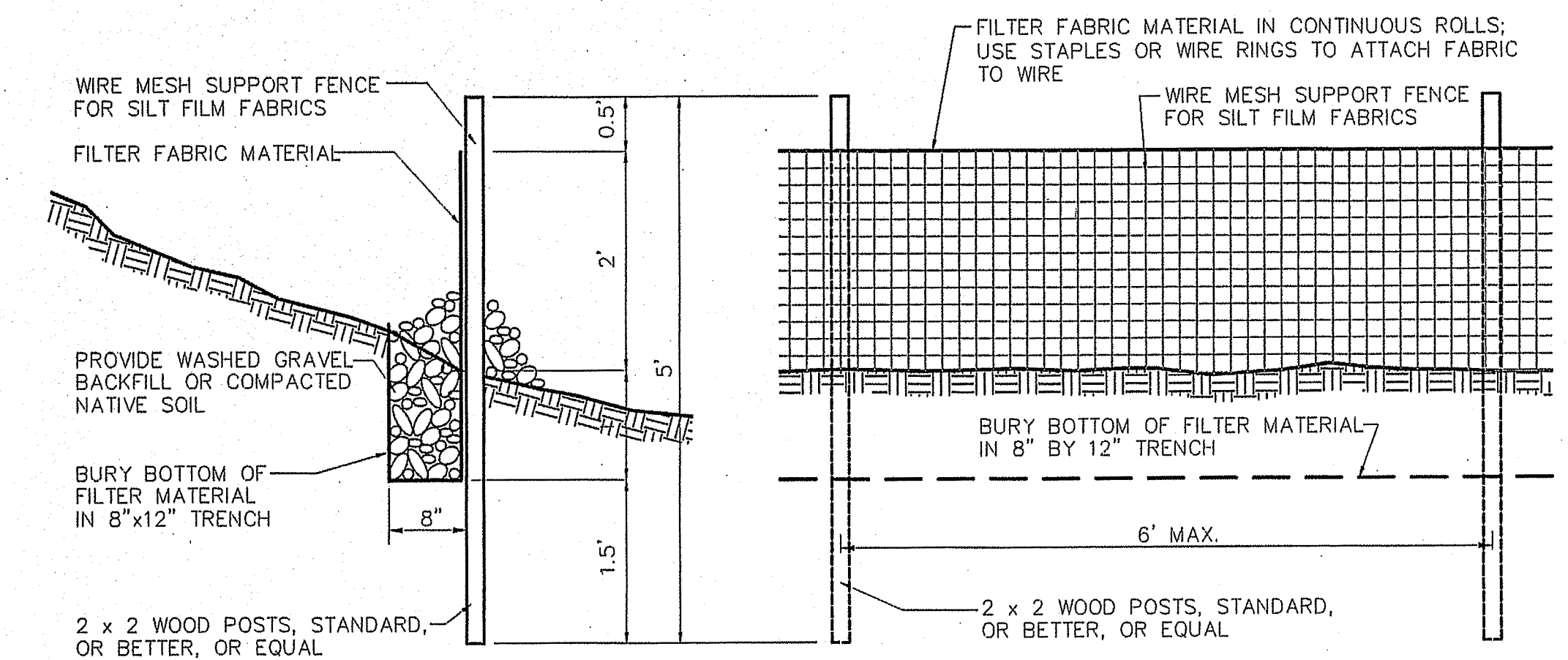
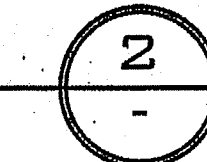
ANY QUARRY SPALLS THAT ARE LOOSE FROM THE PAD, WHICH END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.

IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING (SEE BMPs C103 AND C104) SHALL BE INSTALLED TO CONTROL TRAFFIC.

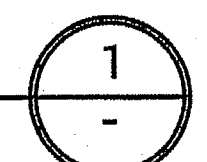
UPON PROJECT COMPLETION AND SITE STABILIZATION, ALL CONSTRUCTION ACCESSSES INTENDED AS PERMANENT ACCESS FOR MAINTENANCE SHALL BE PERMANENTLY STABILIZED.



**ROCK CONSTRUCTION ENTRY**  
NOT TO SCALE



**SILT FENCE DETAIL**  
NOT TO SCALE



**MAINTENANCE STANDARDS:**

|     |          |     |                      |
|-----|----------|-----|----------------------|
| NO. | DATE     | BY  | REVISIONS            |
| A   | 08/03/16 | RMA | ORIGINAL PREPARATION |

|                        |                        |   |
|------------------------|------------------------|---|
| <b>SCALE:</b>          | <b>PROJ #:</b> 13-1166 | <input checked="" type="checkbox"/> CIVIL |
| <b>HORIZONTAL:</b> N/A | <b>DATE:</b> 08/16/18  | <input type="checkbox"/> STRUCTURAL       |
| <b>VERTICAL:</b> N/A   | <b>DRAWN:</b> RMA      | <input type="checkbox"/> SURVEYING        |
|                        | <b>REVIEWED:</b> TRW   | <input type="checkbox"/> TRAFFIC          |
|                        |                        | <input type="checkbox"/> PLANNING         |
|                        |                        | <input type="checkbox"/> LANDSCAPE        |
|                        |                        | <input type="checkbox"/> OTHER            |

**WCE**  
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**GUSTIN PIPE SWPPP BMPs**  
40TH AVENUE  
SPOKANE COUNTY, WA

Spokane County Permit No. \_\_\_\_\_

**PLANS NOT APPROVED BY AGENCY**

**SHEET C9.2**

JOB NUMBER  
**13-1166**

SE 1/4, SEC. 33, T. 25N., R. 44E., W.M.  
 SW 1/4, SEC. 34, T. 25N., R. 44E., W.M.  
 NE 1/4, SEC. 4, T. 24N., R. 44E., W.M.

**BMP C220: STORM DRAIN INLET PROTECTION**

INFORMATION TAKEN FROM CHAPTER 7 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL 2004 EDITION

**PURPOSE:** TO PREVENT COARSE SEDIMENT FROM ENTERING DRAINAGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.

**CONDITIONS OF USE:** WHERE STORM DRAIN INLETS ARE TO BE MADE OPERATIONAL BEFORE PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA, PROTECTION SHOULD BE PROVIDED FOR ALL STORM DRAIN INLETS DOWNSLOPE AND WITHIN 500 FEET OF A DISTURBED OR CONSTRUCTION AREA, UNLESS THE RUNOFF THAT ENTERS THE CATCH BASIN WILL BE CONVEYED TO A SEDIMENT POND OR TRAP. INLET PROTECTION MAY BE USED ANYWHERE TO PROTECT THE DRAINAGE SYSTEM. IT IS LIKELY THAT THE DRAINAGE SYSTEM WILL REQUIRE CLEANING.

TABLE 7.3.9 (IN THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL) LISTS SEVERAL OPTIONS FOR INLET PROTECTION. ALL OF THE METHODS FOR STORM DRAIN INLET PROTECTION ARE PRONE TO PLUGGING AND REQUIRE A HIGH FREQUENCY OF MAINTENANCE. DRAINAGE AREAS SHOULD BE LIMITED TO 1 ACRE OR LESS. EMERGENCY OVERFLOWS MAY BE REQUIRED WHERE STORMWATER PONDING WOULD CAUSE A HAZARD. IF AN EMERGENCY OVERFLOW IS PROVIDED, ADDITIONAL END-OF-PIPE TREATMENT MAY BE REQUIRED.

**DESIGN AND INSTALLATION:** EXCAVATED DROP INLET PROTECTION - AN EXCAVATED IMPOUNDMENT AROUND THE STORM DRAIN. SEDIMENT SETTLES OUT OF THE STORMWATER PRIOR TO ENTERING THE STORM DRAIN.

- DEPTH 1-2 FT AS MEASURED FROM THE CREST OF THE INLET STRUCTURE.
- SIDE SLOPES OF EXCAVATION NO STEEPER THAN 2:1
- MINIMUM VOLUME OF EXCAVATION 35 CUBIC YARDS
- SHAPE THE BASIN TO FIT THE SITE WITH THE LONGEST DIMENSION ORIENTED TOWARD THE LONGEST INFLOW AREA.
- INSTALL PROVISIONS FOR DRAINING TO PREVENT STANDING WATER PROBLEMS.
- CLEAR THE AREA OF ALL DEBRIS.
- GRADE THE APPROACH TO THE INLET UNIFORMLY.
- DRILL WEEP HOLES INTO THE SIDES OF THE INLET.
- PROTECT WEEP HOLES WITH SCREEN WIRE AND WASHED AGGREGATE.
- SEAL WEEP HOLES WHEN REMOVING STRUCTURE AND STABILIZING AREA.
- IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE TO THE DOWN SLOPE STRUCTURE TO PREVENT BYPASS FLOW.
- BLOCK AND GRAVEL FILTER -** A BARRIER FORMED AROUND THE STORM DRAIN INLET WITH STANDARD CONCRETE BLOCKS AND GRAVEL. SEE FIGURE 4.15 IN THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL.
- HEIGHT 1-2 FT ABOVE THE INLET.
- RECESS THE FIRST ROW 2" INTO THE GROUND FOR STABILITY.
- SUPPORT SUBSEQUENT COURSES BY PLACING A 2X4 THROUGH THE BLOCK OPENING.
- DO NOT USE MORTAR.
- LAY SOME BLOCKS IN THE BOTTOM ROW ON THEIR SIDE FOR DEWATERING THE POOL.
- PLACE HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2" OPENINGS OVER ALL BLOCK OPENINGS.
- PLACE GRAVEL JUST BELOW THE TOP OF BLOCKS ON SLOPES 2:1 OR FLATTER.
- AN ALTERNATIVE DESIGN IN A GRAVEL DONUT.
- INLET SLOPE OF 3:1.
- OUTLET SLOPE OF 2:1.
- 1-FOOT WIDE LEVEL STONE AREA BETWEEN THE STRUCTURE AND THE INLET.
- INLET SLOPES STONES 3" IN DIAMETER OR LARGER.
- OUTLET SLOPE USE GRAVEL 1/2" TO 3/4" AT A MINIMUM THICKNESS OF 1 FOOT.
- GRAVEL AND WIRE MESH INLET -** A GRAVEL BARRIER PLACED OVER TOP OF THE INLET. THIS STRUCTURE DOES NOT PROVIDE AN OVERFLOW.
- HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2" OPENINGS.
- COARSE AGGREGATE.
- HEIGHT 1-FOOT OR MORE, 18" WIDER THAN INLET ON ALL SIDES.
- PLACE WIRE MESH OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1-FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE.
- IF MORE THAN ONE STRIP OF MESH IS NECESSARY, OVERLAP THE STRIPS.
- PLACE COARSE AGGREGATE OVER THE WIRE MESH.
- THE DEPTH OF THE GRAVEL SHOULD BE AT LEAST 12" OVER THE ENTIRE INLET OPENING AND EXTEND AT LEAST 18" ON ALL SIDES.

DESIGN AND INSTALLATION CONTINUED:

**CATCH BASIN FILTERS -** INSERTS SHOULD BE DESIGNED BY THE MANUFACTURER FOR USE AT CONSTRUCTION SITES. THE LIMITED SEDIMENT STORAGE CAPACITY INCREASES THE AMOUNT OF INSPECTION AND MAINTENANCE REQUIRED, WHICH MAY BE DAILY FOR HEAVY SEDIMENT LOADS. THE MAINTENANCE REQUIREMENTS CAN BE REDUCED BY COMBINING A CATCH BASIN FILTER WITH ANOTHER TYPE OF INLET PROTECTION. THIS TYPE OF INLET PROTECTION PROVIDES FLOW BYPASS WITHOUT OVERFLOW AND THEREFORE MAY BE A BETTER METHOD FOR INLETS LOCATED ALONG ACTIVE RIGHTS-OF-WAY.

- 5 CUBIC FEET OF STORAGE
- DEWATERING PROVISIONS
- HIGH-FLOW BYPASS THAT WILL NOT CLOG UNDER NORMAL USE AT A CONSTRUCTION SITE.
- THE CATCH BASIN FILTER IS INSERTED IN THE CATCH BASIN JUST BELOW THE GRATING.

**CURB INLET PROTECTION WITH WOODEN WEIR -** BARRIER FORMED AROUND CURB INLET WITH A WOODEN FRAME AND GRAVEL.

- WIRE MESH WITH 1/2" OPENINGS.
- EXTRA STRENGTH FILTER FABRIC TO THE FRAME.
- PILE COARSE WASHED AGGREGATE AGAINST THE WIRE/FABRIC.
- PLACE WEIGHT ON FRAME ANCHORS.

**BLOCK AND GRAVEL CURB INLET PROTECTION -** BARRIER FORMED AROUND AN INLET WITH CONCRETE BLOCKS AND GRAVEL. SEE FIGURE 7.3.16 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL.

- WIRE MESH WITH 1/2" OPENINGS.
- PLACE 2 CONCRETE BLOCKS ON THEIR SIDES ABUTTING THE CURB AT EITHER SIDE OF THE INLET OPENING. THESE ARE SPACER BLOCKS.
- PLACE A 2X4 STUD THROUGH THE OUT HOLES OF EACH SPACER BLOCK TO ALIGN THE FRONT BLOCKS.
- PLACE BLOCKS ON THEIR SIDES ACROSS THE FRONT OF THE INLET AND ABUTTING THE SPACER BLOCKS.
- PLACE WIRE MESH OVER THE OUTSIDE VERTICAL FACE.
- PILE COARSE AGGREGATE AGAINST THE WIRE TO THE TOP OF THE BARRIER.

**CURB AND GUTTER SEDIMENT BARRIER -** SANDBAG OR ROCK BERM (RIPRAP AND AGGREGATE) 3 FEET HIGH AND 3 FEET WIDE IN A HORSESHOE SHAPE. SEE FIGURE 7.3.17 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL.

CONSTRUCT HORSESHOE SHAPED BERM, FACED WITH COARSE AGGREGATE IF USING RIPRAP, 3 FEET HIGH AND 3 FEET WIDE, AT LEAST 2 FEET FROM THE INLET.

CONSTRUCT A HORSESHOE SHAPED SEDIMENTATION TRAP ON THE OUTSIDE OF THE BERM SIZED TO SEDIMENT TRAP STANDARDS FOR PROTECTING A CULVERT INLET.

**MAINTENANCE STANDARDS:**

CATCH BASIN FILTERS SHOULD BE INSPECTED FREQUENTLY, ESPECIALLY AFTER STORM EVENTS. IF THE INSERT BECOMES CLOGGED, IT SHOULD BE CLEANED OR REPLACED.

FOR SYSTEMS USING STONE FILTERS: IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT, THE STONES MUST BE PULLED AWAY FROM THE INLET AND CLEANED OR REPLACED. SINCE CLEANING OF GRAVEL AT A CONSTRUCTION SITE MAY BE DIFFICULT, AN ALTERNATIVE APPROACH WOULD BE USED TO USE THE CLOGGED STONE AS FILL AND PUT FRESH STONE AROUND THE INLET.

DO NOT WASH SEDIMENT INTO STORM DRAINS WHILE CLEANING. SPREAD ALL EXCAVATED MATERIAL EVENLY OVER THE SURROUNDING LAND AREA OR STOCKPILE AND STABILIZE AS APPROPRIATE.

**BMP C151: CONCRETE HANDLING**

INFORMATION TAKEN FROM CHAPTER 7 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL 2004 EDITION

**PURPOSE:**

CONCRETE WORK CAN GENERATE PROCESS WATER AND SLURRY THAT CONTAIN FINE PARTICLES AND HIGH PH, BOTH OF WHICH CAN VIOLATE WATER QUALITY STANDARDS IN THE RECEIVING WATER. THIS BMP IS INTENDED TO MINIMIZE AND ELIMINATE CONCRETE PROCESS WATER AND SLURRY FROM ENTERING WATERS OF THE STATE.

**CONDITIONS OF USE:**

ANY TIME CONCRETE IS USED, THESE MANAGEMENT PRACTICES SHALL BE UTILIZED. CONCRETE CONSTRUCTION PROJECTS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- CURBS
- SIDEWALKS
- ROADS
- BRIDGES
- FOUNDATIONS
- FLOORS
- RUNWAYS

**DESIGN AND INSTALLATION:**

CONCRETE TRUCK CHUTES, PUMPS, AND INTERNALS SHALL BE WASHED OUT ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR ASPHALT.

UNUSED CONCRETE REMAINING IN THE TRUCK AND PUMP SHALL BE RETURNED TO THE ORIGINATING BATCH PLANT FOR RECYCLING.

HAND TOOLS INCLUDING, BUT NOT LIMITED TO, SCREEDS, SHOVELS, RAKES, FLOATS, AND TROWELS SHALL BE WASHED OFF ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR ASPHALT.

EQUIPMENT THAT CANNOT BE EASILY MOVED, SUCH AS CONCRETE PAVERS, SHALL ONLY BE WASHED IN AREAS THAT DO NOT DIRECTLY DRAIN TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.

WASHDOWN FROM AREAS SUCH AS CONCRETE AGGREGATE DRIVEWAYS SHALL NOT DRAIN DIRECTLY TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.

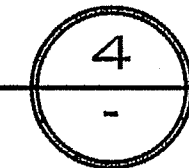
WHEN NO FORMED AREAS ARE AVAILABLE, WASHWATER AND LEFTOVER PRODUCT SHALL BE CONTAINED IN A LINED CONTAINER. CONTAINED CONCRETE SHALL BE DISPOSED OF IN A MANNER THAT DOES NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.

**MAINTENANCE STANDARDS:**

CONTAINERS SHALL BE CHECKED FOR HOLES IN THE LINER DAILY DURING CONCRETE POURS AND REPAIRED THE SAME DAY.

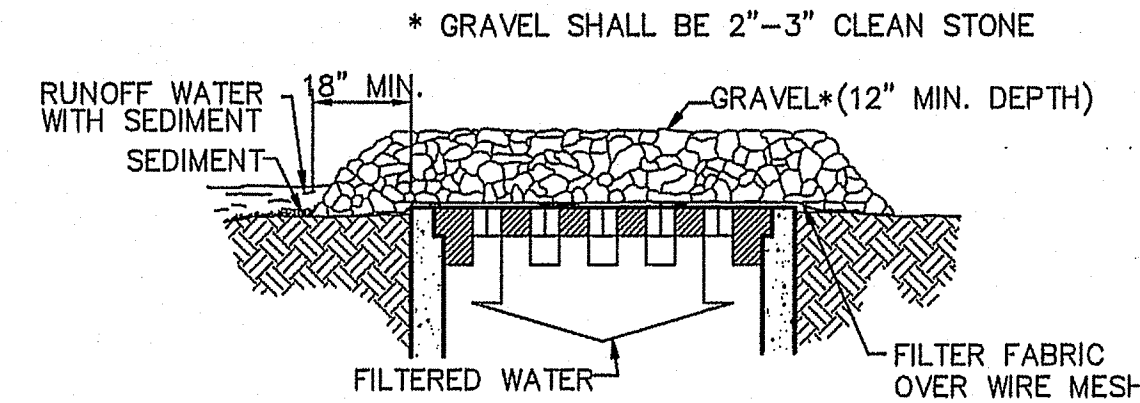
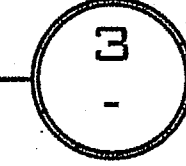
**CONCRETE TRUCK WASHOUT STANDARDS**

NOT TO SCALE



**GRAVEL AND WIRE MESH INLET SEDIMENT FILTER**

NOT TO SCALE



**SPECIFIC APPLICATION**

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED ACRES.

**BMP C140: DUST CONTROL**

INFORMATION TAKEN FROM CHAPTER 7 OF THE EASTERN WASHINGTON STORMWATER MANAGEMENT MANUAL 2004 EDITION

**PURPOSE:**

DUST CONTROL PREVENTS WIND TRANSPORT OF DUST FROM DISTURBED SOIL SURFACES ONTO ROADWAYS, DRAINAGE WAYS, AND SURFACE WATERS. WIND EROSION IS A SIGNIFICANT CAUSE OF SOIL MOVEMENT FROM CONSTRUCTION SITES IN EASTERN WASHINGTON. ALTHOUGH WIND EROSION CAN CONTRIBUTE TO WATER QUALITY IMPACTS, DUST CONTROL IS REGULATED IN SOME AREAS OF EASTERN WASHINGTON PRIMARILY THROUGH LOCAL AIR QUALITY AUTHORITIES. WHERE SUCH AN ENTITY EXISTS, CONTACT THE LOCAL AIR QUALITY AUTHORITY FOR APPROPRIATE AND REQUIRED BMPs FOR DUST CONTROL TO IMPLEMENT AT YOUR PROJECT SITE.

**CONDITIONS OF USE:**

IN AREAS (INCLUDING ROADWAYS) SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON-SITE AND OFF-SITE IMPACTS TO ROADWAYS, DRAINAGE WAYS, OR SURFACE WATERS ARE LIKELY.

**DESIGN AND INSTALLATION:**

CONTACT YOUR LOCAL AIR POLLUTION CONTROL AUTHORITY FOR GUIDANCE AND TRAINING ON OTHER DUST CONTROL MEASURES. COMPLIANCE WITH THE LOCAL AIR POLLUTION CONTROL AUTHORITY CONSTITUTES COMPLIANCE WITH THIS BMP.

WATER APPLIED TO CONSTRUCTION SITES FOR DUST CONTROL MUST NOT LEAVE THE SITE AS SURFACE RUNOFF.

SEE ALSO "TECHNIQUES FOR DUST PREVENTION AND SUPPRESSION," ECOLOGY PUBLICATION NUMBER 96-433, REVISED APRIL 2002.

TECHNIQUES THAT CAN BE USED FOR CONSTRUCTION PROJECTS INCLUDE:

VEGETATE OR MULCH AREAS THAT WILL NOT RECEIVE VEHICLE TRAFFIC. IN AREAS WHERE PLANTING, MULCHING, OR PAVING IS IMPRACTICAL, APPLY GRAVEL OR LANDSCAPING ROCK.

LIMIT DUST GENERATION BY CLEARING ONLY THOSE AREAS WHERE IMMEDIATE ACTIVITY WILL TAKE PLACE, LEAVING THE REMAINDER AREA(S) IN THE ORIGINAL CONDITION, IF STABLE. MAINTAIN THE ORIGINAL GROUND COVER AS LONG AS PRACTICAL.

CONSTRUCT NATURAL OR ARTIFICIAL WINDBREAKS OR WINDSCREENS. THESE MAY BE DESIGNED AS ENCLOSURES FOR SMALL DUST SOURCES.

SPRINKLE THE SITE WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED. TO PREVENT CARRYOUT OF MUD ONTO STREET, REFER TO STABILIZED CONSTRUCTION ENTRANCE (BMP C105).

IRRIGATION WATER CAN BE USED FOR DUST CONTROL. IRRIGATION SYSTEMS SHOULD BE INSTALLED AS A FIRST STEP ON SITES WHERE DUST CONTROL IS A CONCERN.

SPRAY EXPOSED SOIL AREAS WITH A DUST PALLIATIVE, FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND CAUTIONS REGARDING ANILING AND APPLICATION. USED OIL IS PROHIBITED FROM USE AS A DUST SUPPRESSANT. LOCAL GOVERNMENTS MAY APPROVE OTHER DUST PALLIATIVES SUCH AS CALCIUM CHLORIDE OR PAM.

PAM (BMP C126) ADDED TO WATER AT A RATE OF 0.5LBS PER 1,000 GALLONS OF WATER PER ACRE AND APPLIED FROM A WATER TRUCK IS MORE EFFECTIVE THAN WATER ALONE. THIS IS DUE TO THE INCREASED INFILTRATION OF WATER INTO THE SOIL AND REDUCED EVAPORATION. IN ADDITION, SMALL SOIL PARTICLES ARE BONDED TOGETHER AND ARE NOT AS EASILY TRANSPORTED BY WIND. ADDING PAM MAY ACTUALLY REDUCE THE QUANTITY OF WATER NEEDED FOR DUST CONTROL, ESPECIALLY IN EASTERN WASHINGTON. SINCE THE WHOLESALE COST OF PAM IS ABOUT \$4.00 PER POUND, THIS IS AN EXTREMELY COST-EFFECTIVE DUST CONTROL METHOD.

TECHNIQUES THAT CAN BE USED FOR UNPAVED ROADS AND LOTS INCLUDE:

LOWER SPEED LIMITS. HIGH VEHICLE SPEEDS INCREASES THE AMOUNT OF DUST STIRRED UP FROM UNPAVED ROADS AND LOTS.

UPGRADE ROAD SURFACE STRENGTH BY IMPROVING PARTICLE SIZE, SHAPE, AND MINERAL TYPES THAT MAKE UP THE SURFACE AND BASE MATERIALS.

ADD SURFACE GRAVEL TO REDUCE THE SOURCE OF DUST EMISSION. LIMIT THE AMOUNT OF FINE PARTICLES (THOSE SMALLER THAN .075 MILLIMETERS) TO 10 TO 20 PERCENT.

USE GEOTEXTILE FABRIC TO INCREASE THE STRENGTH OF NEW ROADS OR ROADS UNDERGOING RECONSTRUCTION.

ENCOURAGE THE USE OF ALTERNATE, PAVED ROUTES, IF AVAILABLE.

RESTRICT USE BY TRACKED VEHICLES AND HEAVY TRUCKS TO PREVENT DAMAGE TO ROAD SURFACE AND BASE.

APPLY CHEMICAL DUST SUPPRESSANTS USING THE ADMIX METHOD, BLENDING THE PRODUCT WITH THE TOP FEW INCHES OF MATERIAL. SUPPRESSANTS MAY ALSO BE APPLIED AS SURFACE TREATMENTS.

PAVE UNPAVED PERMANENT ROADS AND OTHER TRAFFICKED AREAS.

USE VACUUM STREET SWEEPERS.

REMOVED MUD AND OTHER DIRT PROMPTLY SO IT DOES NOT DRY AND THEN TURN INTO DUST.

LIMIT DUST-CAUSING WORK ON WINDY DAYS.

REPAV AREA AS NECESSARY TO KEEP DUST TO A MINIMUM. WATER APPLIED TO CONSTRUCTION SITES FOR DUST CONTROL MUST NOT LEAVE THE SITE AS SURFACE RUNOFF.

**UNDERGROUND SERVICE ALERT**  
 ONE-CALL NUMBER  
**811**  
 CALL TWO BUSINESS DAYS BEFORE YOU DIG

NAVD - 88  
 TBM S-5 OF THE SOUTH PONDEROSA SEWER PROJECT  
 WITH AN ELEVATION OF 2005.87 (NAVD29) = 2009.67  
 (NAVD88) WAS USED FOR THE VERTICAL DATUM FOR THIS MAP.

| NO. | DATE     | BY  | REVISIONS            |
|-----|----------|-----|----------------------|
| A   | 08/03/18 | RMA | ORIGINAL PREPARATION |

|               |                 |
|---------------|-----------------|
| <b>SCALE:</b> | PROJ #: 13-1166 |
| HORIZONTAL:   | DATE: 08/16/18  |
| N/A           | DRAWN: RMA      |
| VERTICAL:     | REVIEWED: TRW   |
| N/A           |                 |

|   |
|---|
| <input checked="" type="checkbox"/> CIVIL |
| <input type="checkbox"/> STRUCTURAL       |
| <input type="checkbox"/> SURVEYING        |
| <input type="checkbox"/> TRAFFIC          |
| <input type="checkbox"/> PLANNING         |
| <input type="checkbox"/> LANDSCAPE        |
| <input type="checkbox"/> OTHER            |

**IWCE**  
 WHIPPLE CONSULTING ENGINEERS  
 21 S. PINES RD.  
 SPOKANE VALLEY, WA 99208  
 PH: 509-893-2617 FAX: 509-826-0227

**GUSTIN PIPE SWPPP BMPs**  
 40TH AVENUE  
 SPOKANE COUNTY, WA

PLANS NOT APPROVED BY AGENCY

Spokane County Permit No.:  
  
**TODD R. WHIPPLE**  
 25482  
 REGISTERED PROFESSIONAL ENGINEER

**SHEET C9.3**  
 JOB NUMBER 13-1166