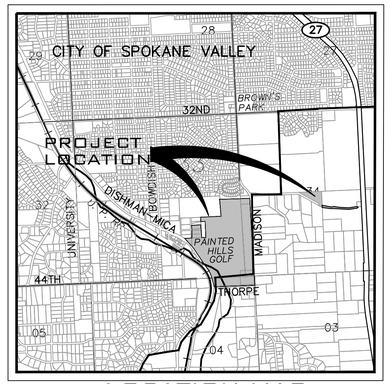
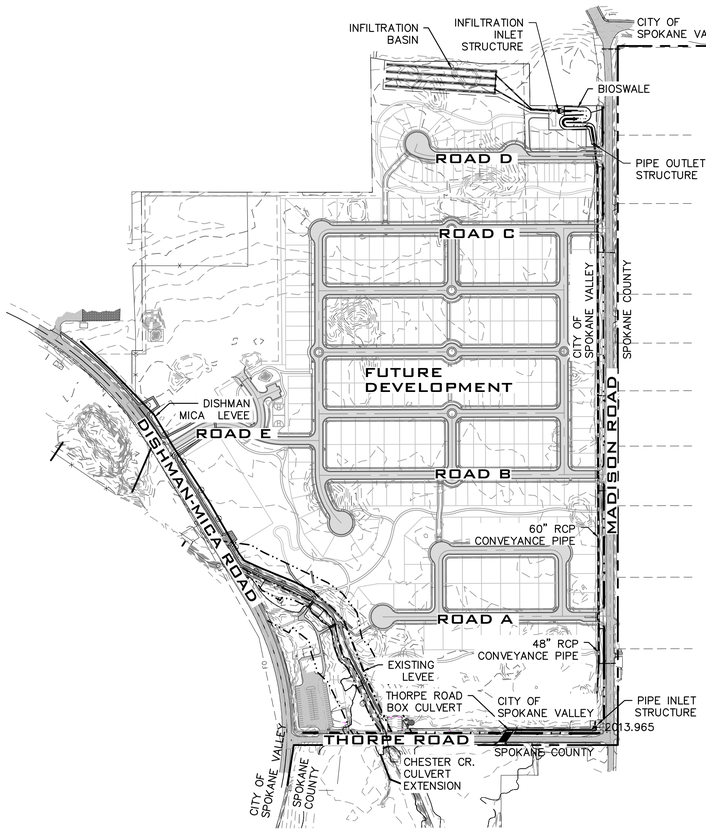
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG

IMPROVEMENT PLANS
PAINTED HILLS FLOOD CONTROL PLANS
LOCATED IN A PORTION OF
SE1/4, SEC. 33, T.25N., R. 44E., W.M.
CITY OF SPOKANE VALLEY, WA



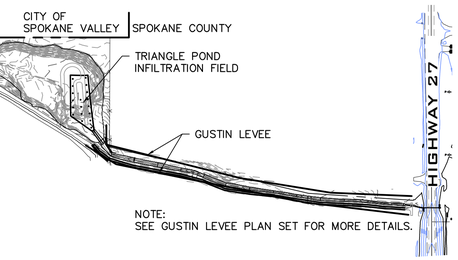
LOCATION MAP



SITE PLAN VIEW

SCALE: 1"=300'

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.



NOTE:
SEE GUSTIN LEVEE PLAN SET FOR MORE DETAILS.

N
W E
S
GRAPHIC SCALE
300 0 150 300 600
(IN FEET)
1 inch = 300 ft.

SHEET INDEX

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	
	SEWER	
	SANITARY SEWER	S S S S
S S S S	MANHOLE	S S S S
	CLEANOUT	S S S S
	SEWER SERVICE	S S
	WATER	
W W W W	WATER LINE	W W W W
	VALVE	W W W W
	FIRE HYDRANT	W W W W
	SERVICE	W W W W
	WATER METER	W W W W
	BLOWOFF	W W W W
	AIR VACUUM RELIEF STATION	W W W W
	DRAINAGE	
MH DW CB	DRAINAGE LINE	MH DW CB
	MANHOLE	
	DRYWELL	
	CATCH BASIN	
	DITCH	
	GAS	
G G G G	GAS LINE	G
	VALVE	V
GM	METER	GM
	TELE-POWER	
BT BT BT	BURIED TELEPHONE	BT BT
PP	POWER OR TELEPHONE POLE	
BP BP BP	BURIED POWER	BP BP
TP	TRANSFORMER PAD	TP
TR	TELEPHONE RISER	TR
T TV	TELEPHONE VAULT	TV T
OP OP OP	OVERHEAD POWER	OH OH
GA	GUY ANCHOR	GA
PV P	POWER VAULT	P PV
LP	LIGHT POLE	LP

ABBREVIATIONS

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

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.

PERMIT SPECIALIST
CITY OF SPOKANE VALLEY
PERMIT CENTER
11707 E SPRAGUE AVE
SPOKANE, WA 99206
PHONE: 720-5240

DEV. CONST. INSP.
CITY OF SPOKANE VALLEY
11707 E SPRAGUE AVE
SPOKANE, WA 99206
PHONE: 720-5324
CONTACT: JOHN JOHNSON

CABLE
COMCAST BROADBAND
1717 E BUCKEYE AVE
SPOKANE, WA 99207
PHONE: 755-4717
CONTACT: BRYAN RICHARDSON

SEWER
SPOKANE COUNTY UTILITIES
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: TRACI HARVEY

POWER
INLAND POWER & LIGHT CO.
10100 W HALLETT RD
SPOKANE, WA 99224
PHONE: 509-789-4291
CONTACT: CONNIE NELSON

SURVEYOR
WHIPPLE CONSULTING ENGINEERS
2528 N SULLIVAN RD
SPOKANE VALLEY, WA 99216
PHONE: 893-2617
CONTACT: JON GORDON, P.L.S.

ROADWAYS
CITY OF SPOKANE VALLEY
11707 E SPRAGUE AVE
SPOKANE VALLEY, WA 99206
PHONE: 688-0228
CONTACT: M. ALLEN

TELEPHONE
CENTURY LINK
904 N COLUMBUS ST
SPOKANE, WA 99202
PHONE: 623-0305
CONTACT: DEBORAH GEIST

ENGINEERING
WHIPPLE CONSULTING ENGINEERS
2528 N SULLIVAN RD
SPOKANE VALLEY, WA 99216
PHONE: 893-2617
CONTACT: TODD WHIPPLE, P.E.

OWNER
BRYAN WALKER
C/O NAI BLACK
107 S HOWARD ST
SPOKANE, WA 99201
PHONE: 623-1000
CONTACT: BRYAN WALKER

DEVELOPER APPROVAL DATE

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

Spokane County Permit No.:

Floodplain-Grading-

City of Spokane Valley Permit No.:
SUB-2015-0001
FPD-2016-
EGR-201X-XXXX

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

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

SCALE:
HORIZONTAL: 1" = 300'
VERTICAL: N/A

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
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
COVER SHEET
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C0.0

JOB NUMBER 13-1166

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C0.0 COVER.dwg, 10/13/2016 2:42:59 PM

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 SHOULD 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.

GENERAL GRADING NOTES

1. CONTOURS AND / OR ELEVATIONS SHOWN ARE FOR FINISHED PAVING, SIDEWALK, SLAB, OR GROUND. ADJUSTMENT TO SUBGRADE IS THE CONTRACTOR'S RESPONSIBILITY.

2. ALL DISTURBED AREAS THAT ARE UNSURFACED OR ARE NOT DESIGNATED AS LANDSCAPE AREAS ARE TO BE SEEDED, FERTILIZED, AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

3. IF DURING THE OVERLOT GRADING PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE AN UNIDENTIFIED SITUATION IS PRESENT, THE SOILS ENGINEER SHALL BE CONTACTED FOR RECOMMENDATIONS.

4. UNLESS OTHERWISE SHOWN, NO PROPOSED SLOPE SHALL EXCEED THREE (3) HORIZONTAL TO ONE (1) VERTICAL. ALL SLOPED AREAS MUST BE PROTECTED FROM EROSION.

5. IF STRIPPED MATERIALS CONSISTING OF VEGETATION AND ORGANIC MATERIALS ARE STOCKPILED ON THE SITE, TOPSOIL MAY BE PLACED TO A HEIGHT OF FIVE FEET. SILT FENCE SHALL BE PLACED AROUND THE BASE OF THE STOCKPILE AND THE STOCKPILE SHALL BE SEEDED WITH NATIVE SEED MIX IMMEDIATELY AFTER STRIPPING OPERATIONS ARE COMPLETE.

6. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER CONTOURS AND SLOPES SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF SPOT ELEVATIONS THAT DO NOT APPEAR TO BE CONSISTENT WITH THE CONTOURS AND SLOPES. SPOT ELEVATIONS AND SPECIFIC PROFILE DESIGN SHALL BE USED FOR SETTING ELEVATIONS OF CURB, GUTTER, AND UTILITIES. SPOT ELEVATIONS SHALL BE USED FOR FINISHED GRADE.

7. BENCHMARK VERIFICATION: CONTRACTOR SHALL USE BENCHMARKS AND DATUMS SHOWN HEREON TO SET PROJECT BENCH MARK'S), BY RUNNING A LEVEL LOOP BETWEEN AT LEAST TWO BENCHMARKS, AND SHALL PROVIDE SURVEY NOTES OF SUCH TO PROJECT ENGINEER PRIOR TO COMMENCING CONSTRUCTION.

8. ALL UTILITIES (MANHOLES, VALVE COVERS, CLEANOUTS, VAULTS, BOXES, ETC.) SHALL BE ADJUSTED TO FINAL GRADE PRIOR TO THE FINAL LIFT OF ASPHALT.

9. GRADES WITHIN ASPHALT PARKING AREAS SHALL BE CONSTRUCTED TO WITHIN 0.10 FEET OF THE DESIGN GRADE. HOWEVER, THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IN ALL PAVEMENT AREAS AND ALONG ALL CURBS. ALL CURBS SHALL BE BUILT IN ACCORDANCE TO THE PLAN. CURBS OR PAVEMENT AREAS WHICH DO NOT PROVIDE PROPER DRAINAGE MUST BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

10. SPOT ELEVATIONS REPRESENT FLOW LINE OR TOP OF ASPHALT UNLESS OTHERWISE NOTED.

11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN ESTIMATE OF EARTHWORK QUANTITIES.

12. WHERE NEW CURB AND GUTTER IS BEING CONSTRUCTED ADJACENT TO EXISTING ASPHALT OR CONCRETE PAVEMENT, THE FOLLOWING SHALL APPLY: PRIOR TO PLACEMENT OF ANY CONCRETE THE CONTRACTOR SHALL HAVE A LICENSED SURVEYOR VERIFY THE GRADE AND CROSS SLOPE OF THE CURB AND GUTTER FORMS. THE CONTRACTOR SHALL SUBMIT THE SLOPES AND GRADES TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF CONCRETE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY SECTION WHICH DOES NOT CONFORM TO THE DESIGN OR TYPICAL CROSS SECTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CURB AND GUTTER POURS WITHOUT THE APPROVAL OF THE ENGINEER.

13. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL BUILDING PLANS AND SPECIFICATIONS.

14. PRE CAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.

15. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIR AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.

16. EXISTING GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT INTERVALS.

17. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.

18. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.

19. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.

20. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY PROVIDED BY THE OWNER . IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS. WITHOUT EXCEPTION, HE SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.

21. ALL UNSURFACED AREA DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. (CONTRACTOR SHALL PLACE SOD OR HYDROSEED DISTURBED AREAS IN ACCORDANCE WITH CITY/COUNTY SPECIFICATIONS AND MAINTAINED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.)

22. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND SITE SHALL BE CONSTRUCTED TO SAME.

23. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.

24. 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 ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

25. ENGINEER SHALL BE NOTIFIED WHEN 'CURBING STRING LINE' HAS BEEN SET, PRIOR TO CURBING BEING INSTALLED.

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

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

SEPTEMBER
2016
PLANS
NOT APPROVED
BY AGENCY

STATE OF WASHINGTON
TODD R. WHIPPLE
25462
REGISTERED
PROFESSIONAL ENGINEER
10/13/16

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: N/A
VERTICAL: N/A

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: RMA
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
OTHER

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

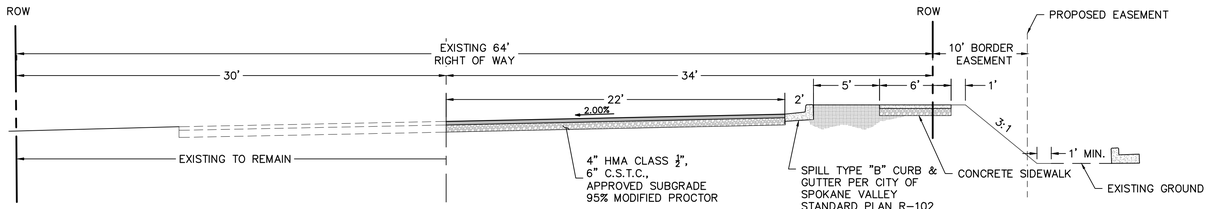
SPOKANE VALLEY PAINTED HILLS PRD
GENERAL NOTES
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET
C0.1

JOB NUMBER
13-1166

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C0.1 GENERAL NOTES.dwg, 10/13/2016 2:48:27 PM

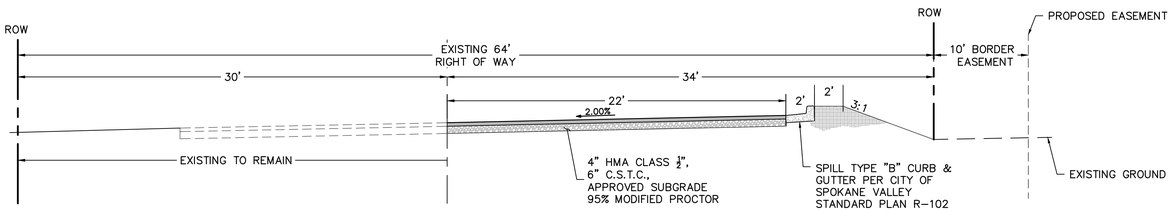
SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.



TYPICAL DISHMAN-MICA RD CROSS SECTION ①

NOT TO SCALE

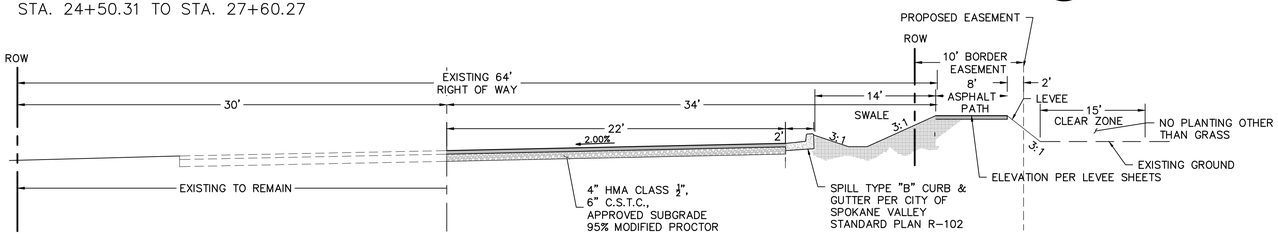
STA. 20+59.67 TO STA. 24+50.31



TYPICAL DISHMAN-MICA RD CROSS SECTION ②

NOT TO SCALE

STA. 24+50.31 TO STA. 27+60.27



TYPICAL DISHMAN-MICA RD CROSS SECTION WITH LEVEE ③

NOT TO SCALE

STA. 27+60.27 TO STA. 35+81.87

WHIPPLE CONSULTING ENGINEERS

ROAD WIDENING CALCULATIONS SHEET TYPE "B" CURB

Street: Painted Hills
Project: Dishman-Mica Rd
Number: 13-1166

Date: 08/04/16
Designer: JPP

1/2 Paving Width = 22.00 ft

FIELD INFORMATION			OFFICE CALCULATIONS									
Station	C/L Elev	EP Elev	C/L Grade	Distance C/L to EP	Existing Cross Slope	Dist C/L to Sawcut	Ex Elev @ Sawcut	Dist Sawcut to Lip of Gutter	Top of Curb @ 4.5%	Min Curb @ 2.0%	Proposed Curb Elev.	Proposed FL Grade	Sta.	Proposed Cross-slope
2000.00	2022.60	-		-	#DIV/0!	0.00	2022.60	22.00	2021.99	2022.54	**2023.42**		2000.00	-0.0200
			0.0034									0.0034		
2050.00	2022.77	-		-	#DIV/0!	0.00	2022.77	22.00	2022.16	2022.71	**2023.59**		2050.00	-0.0200
			0.0079									0.0079		
2059.27	2022.84	-		-	#DIV/0!	0.00	2022.84	22.00	2022.23	2022.78	**2023.66**		2059.27	-0.0200
			0.0068									0.0068		
2100.00	2023.12	-		-	#DIV/0!	0.00	2023.12	22.00	2022.51	2023.06	**2023.94**		2100.00	-0.0200
			0.0052									0.0052		
2150.00	2023.38	-		-	#DIV/0!	0.00	2023.38	22.00	2022.77	2023.32	**2024.20**		2150.00	-0.0200
			0.0025									0.0025		
2200.00	2023.50	-		-	#DIV/0!	0.00	2023.50	22.00	2022.89	2023.44	**2024.32**		2200.00	-0.0200
			0.0004									0.0004		
2250.00	2023.52	-		-	#DIV/0!	0.00	2023.52	22.00	2022.91	2023.46	**2024.34**		2250.00	-0.0200
			-0.0038									-0.0038		
2300.00	2023.33	-		-	#DIV/0!	0.00	2023.33	22.00	2022.72	2023.27	**2024.15**		2300.00	-0.0200
			-0.0071									-0.0071		
2350.00	2022.98	-		-	#DIV/0!	0.00	2022.98	22.00	2022.37	2022.92	**2023.80**		2350.00	-0.0200
			-0.0093									-0.0093		
2400.00	2022.51	-		-	#DIV/0!	0.00	2022.51	22.00	2021.90	2022.45	**2023.33**		2400.00	-0.0200
			-0.0114									-0.0114		
2450.00	2021.94	-		-	#DIV/0!	0.00	2021.94	22.00	2021.33	2021.88	**2022.76**		2450.00	-0.0200
			-0.0162									-0.0162		
2500.00	2021.13	-		-	#DIV/0!	0.00	2021.13	22.00	2020.52	2021.07	**2021.95**		2500.00	-0.0200
			-0.0209									-0.0209		
2550.00	2020.08	-		-	#DIV/0!	0.00	2020.08	22.00	2019.47	2020.02	**2020.90**		2550.00	-0.0200
			-0.0217									-0.0217		
2600.00	2019.00	-		-	#DIV/0!	0.00	2019.00	22.00	2018.39	2018.94	**2019.82**		2600.00	-0.0200
			-0.0267									-0.0267		
2650.00	2017.67	-		-	#DIV/0!	0.00	2017.67	22.00	2017.06	2017.61	**2018.49**		2650.00	-0.0200
			-0.0317									-0.0317		
2700.00	2016.08	-		-	#DIV/0!	0.00	2016.08	22.00	2015.47	2016.02	**2016.90**		2700.00	-0.0200
			-0.0254									-0.0254		
2725.50	2015.43	-		-	#DIV/0!	0.00	2015.43	22.00	2014.82	2015.37	**2016.25**		2725.50	-0.0200
			-0.0291									-0.0291		
2750.00	2014.72	-		-	#DIV/0!	0.00	2014.72	22.00	2014.11	2014.66	**2015.54**		2750.00	-0.0200
			-0.0243									-0.0243		
2797.49	2013.57	-		-	#DIV/0!	0.00	2013.57	22.00	2012.96	2013.51	**2014.39**		2797.49	-0.0200
			-0.0231									-0.0231		
2800.00	2013.51	-		-	#DIV/0!	0.00	2013.51	22.00	2012.90	2013.45	**2014.33**		2800.00	-0.0200
			-0.0157									-0.0157		
2850.00	2012.73	-		-	#DIV/0!	0.00	2012.73	22.00	2012.12	2012.67	**2013.55**		2850.00	-0.0200
			-0.0157									-0.0157		
2900.00	2011.94	-		-	#DIV/0!	0.00	2011.94	22.00	2011.33	2011.88	**2012.76**		2900.00	-0.0200
			-0.0178									-0.0178		
2950.00	2011.05	-		-	#DIV/0!	0.00	2011.05	22.00	2010.44	2010.99	**2011.87**		2950.00	-0.0200
			-0.0056									-0.0056		
3000.00	2010.77	-		-	#DIV/0!	0.00	2010.77	22.00	2010.16	2010.71	**2011.59**		3000.00	-0.0200
			-0.0084									-0.0084		
3050.00	2010.35	-		-	#DIV/0!	0.00	2010.35	22.00	2009.74	2010.29	**2011.17**		3050.00	-0.0200
			-0.0030									-0.0030		
3100.00	2010.20	-		-	#DIV/0!	0.00	2010.20	22.00	2009.59	2010.14	**2011.02**		3100.00	-0.0200
			-0.0026									-0.0026		
3150.00	2010.07	-		-	#DIV/0!	0.00	2010.07	22.00	2009.46	2010.01	**2010.89**		3150.00	-0.0200
			-0.0050									-0.0050		
3200.00	2009.82	-		-	#DIV/0!	0.00	2009.82	22.00	2009.21	2009.76	**2010.64**		3200.00	-0.0200
			-0.0022									-0.0022		
3250.00	2009.71	-		-	#DIV/0!	0.00	2009.71	22.00	2009.10	2009.65	**2010.53**		3250.00	-0.0200
			-0.0078									-0.0078		
3285.69	2009.43	-		-	#DIV/0!	0.00	2009.43	22.00	2008.82	2009.37	**2010.25**		3285.69	-0.0200
			-0.0035									-0.0035		
3300.00	2009.38	-		-	#DIV/0!	0.00	2009.38	22.00	2008.77	2009.32	**2010.20**		3300.00	-0.0200
			-0.0036									-0.0036		
3350.00	2009.20	-		-	#DIV/0!	0.00	2009.20	22.00	2008.59	2009.14	**2010.02**		3350.00	-0.0200
			-0.0035									-0.0035		
3378.69	2009.10	-		-	#DIV/0!	0.00	2009.10	22.00	2008.49	2009.04	**2009.92**		3378.69	-0.0200
			-0.0038									-0.0038		
3400.00	2009.02	-		-	#DIV/0!	0.00	2009.02	22.00	2008.41	2008.96	**2009.84**		3400.00	-0.0200
			-0.0034											
3450.00	2008.85	-		-	#DIV/0!	0.00	2008.85	22.00	2008.24	2008.79	**2009.67**		3450.00	-0.0200
			-0.0036									-0.0036		
3476.74	2008.76	-		-	#DIV/0!	0.00	2008.76	22.00	2008.15	2008.70	**2009.58**		3476.74	-0.0200
			-0.0021											
3500.00	2008.71	-		-	#DIV/0!	0.00	2008.71	22.00	2008.10	2008.65	**2009.53**		3500.00	-0.0200
			-0.0033									-0.0033		
3550.00	2008.54	-		-	#DIV/0!	0.00	2008.54	22.00	2007.93	2008.48	**2009.36**		3550.00	-0.0200
			-0.0006											
3566.01	2008.53	-		-	#DIV/0!	0.00	2008.53	22.00	2007.92	2008.47	**2009.35**		3566.01	-0.0200
			-0.0011									-0.0011		
3582.95	2008.51	-		-	#DIV/0!	0.00	2008.51	22.00	2007.90	2008.45	**2009.33**		3582.95	-0.0200
			-0.0015											
3600.00	2008.49	-		-	#DIV/0!	0.00	2008.49	22.00	2007.88	2008.43	**2009.31**		3600.00	-0.0200
			-0.0021									-0.0021		
3650.00	2008.39	-		-	#DIV/0!	0.00	2008.39	22.00	2007.78	2008.33	**2009.21**		3650.00	-0.0200

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

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

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: N/A
VERTICAL: N/A

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X	CIVIL
	STRUCTURAL
	SURVEYING
	TRAFFIC
	PLANNING
	LANDSCAPE
	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
ROAD CROSS SECTIONS
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

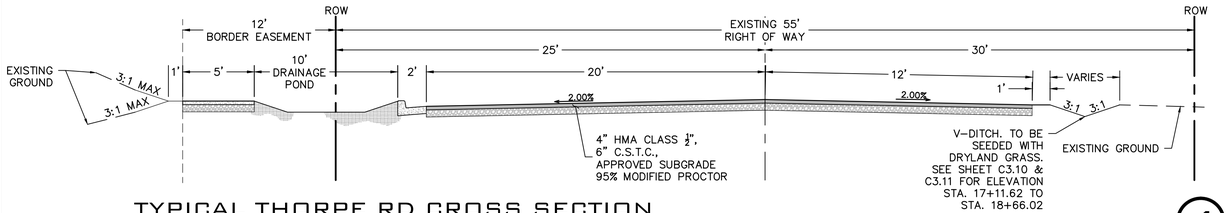
SHEET C0.2

JOB NUMBER 13-1166

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C0.2 CROSS SECTIONS.dwg, 10/13/2016 2:49:05 PM

SE¼, SEC.33, T.25N., R.44E., W.M.
SW½, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

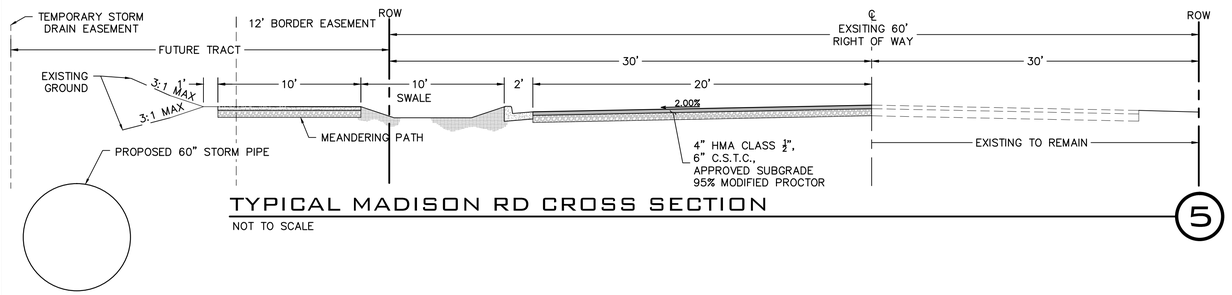
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG



TYPICAL THORPE RD CROSS SECTION

NOT TO SCALE

4



TYPICAL MADISON RD CROSS SECTION

NOT TO SCALE

5

WHIPPLE CONSULTING ENGINEERS

ROAD WIDENING CALCULATIONS SHEET TYPE "B" CURB

Street: Painted Hills — Date: 08/04/16
Project: Madison Road — Designer: JPP
Number: 13-1166

1/2 Paving width = 20.00 ft.

FIELD INFORMATION			OFFICE CALCULATIONS										
Station	C/L Elev.	EP Elev	Distance C/L to EP	Existing Cross Slope	Dist C/L to Sawcut	Ex Elev @ Sawcut	Dist Sawcut to Lip of Gutter	Top of Curb @ -4.5%	Min Curb @ -2.0%	Proposed Curb Elev.	Proposed FL Grade	Sta.	Proposed Cross-slope
1051.45	2014.24	-	-	#DIV/0!	0.00	2014.24	20.00	2013.72	2014.22	**2014.02**	-0.0072	1051.45	0.0300
1100.00	2013.89	-	-	#DIV/0!	0.00	2013.89	20.00	2013.37	2013.87	**2013.67**	-0.0078	1100.00	0.0300
1150.00	2013.50	-	-	#DIV/0!	0.00	2013.50	20.00	2012.98	2013.48	**2013.28**	-0.0076	1150.00	0.0300
1200.00	2013.12	-	-	#DIV/0!	0.00	2013.12	20.00	2012.60	2013.10	**2012.90**	-0.0072	1200.00	0.0300
1250.00	2012.76	-	-	#DIV/0!	0.00	2012.76	20.00	2012.24	2012.74	**2012.54**	-0.0100	1250.00	0.0300
1300.00	2012.26	-	-	#DIV/0!	0.00	2012.26	20.00	2011.74	2012.24	**2012.04**	-0.0128	1300.00	0.0300
1350.00	2011.62	-	-	#DIV/0!	0.00	2011.62	20.00	2011.10	2011.60	**2011.40**	-0.0104	1350.00	0.0300
1400.00	2011.10	-	-	#DIV/0!	0.00	2011.10	20.00	2010.58	2011.08	**2010.88**	-0.0145	1400.00	0.0300
1466.04	2010.14	-	-	#DIV/0!	0.00	2010.14	20.00	2009.62	2010.12	**2009.92**	-0.0025	1466.04	0.0300
1565.04	2009.89	-	-	#DIV/0!	0.00	2009.89	20.00	2009.37	2009.87	**2009.67**	-0.0003	1565.04	0.0300
1600.00	2009.88	-	-	#DIV/0!	0.00	2009.88	20.00	2009.36	2009.86	**2009.48**	-0.0010	1600.00	0.0390
1650.00	2009.83	-	-	#DIV/0!	0.00	2009.83	20.00	2009.31	2009.81	**2009.74**	0.0008	1650.00	0.0235
1700.00	2009.87	-	-	#DIV/0!	0.00	2009.87	20.00	2009.35	2009.85	**2009.49**	0.0034	1700.00	0.0380
1750.00	2010.04	-	-	#DIV/0!	0.00	2010.04	20.00	2009.52	2010.02	**2009.74**	0.0028	1750.00	0.0340
1800.00	2010.18	-	-	#DIV/0!	0.00	2010.18	20.00	2009.66	2010.16	**2010.16**	0.0002	1800.00	0.0200
1850.00	2010.19	-	-	#DIV/0!	0.00	2010.19	20.00	2009.67	2010.17	**2009.91**	0.0000	1850.00	0.0330
1900.00	2010.19	-	-	#DIV/0!	0.00	2010.19	20.00	2009.67	2010.17	**2010.16**	-0.0100	1900.00	0.0205
1950.00	2009.69	-	-	#DIV/0!	0.00	2009.69	20.00	2009.17	2009.67	**2009.67**	0.0028	1950.00	0.0200
2000.00	2009.83	-	-	#DIV/0!	0.00	2009.83	20.00	2009.31	2009.81	**2009.42**	-0.0056	2000.00	0.0395
2062.04	2009.48	-	-	#DIV/0!	0.00	2009.48	20.00	2008.96	2009.46	**2009.11**	-0.0035	2062.04	0.0375
2155.04	2009.15	-	-	#DIV/0!	0.00	2009.15	20.00	2008.63	2009.13	**2009.05**	-0.0053	2155.04	0.0240
2200.00	2008.91	-	-	#DIV/0!	0.00	2008.91	20.00	2008.39	2008.89	**2008.82**	0.0033	2200.00	0.0235
2250.00	2008.89	-	-	#DIV/0!	0.00	2008.89	20.00	2008.37	2008.87	**2008.57**	0.0045	2250.00	0.0350
2300.00	2009.05	-	-	#DIV/0!	0.00	2009.05	20.00	2008.53	2009.03	**2008.82**	0.0052	2300.00	0.0307
2350.00	2009.28	-	-	#DIV/0!	0.00	2009.28	20.00	2008.76	2009.26	**2009.07**	0.0054	2350.00	0.0295
2400.00	2009.54	-	-	#DIV/0!	0.00	2009.54	20.00	2009.02	2009.52	**2009.32**	0.0016	2400.00	0.0300
2450.00	2009.81	-	-	#DIV/0!	0.00	2009.81	20.00	2009.29	2009.79	**2009.57**	0.0046	2450.00	0.0310
2500.00	2009.89	-	-	#DIV/0!	0.00	2009.89	20.00	2009.37	2009.87	**2009.82**	-0.0064	2500.00	0.0225
2550.00	2010.12	-	-	#DIV/0!	0.00	2010.12	20.00	2009.60	2010.10	**2010.07**	-0.0038	2550.00	0.0215
2600.00	2009.80	-	-	#DIV/0!	0.00	2009.80	20.00	2009.28	2009.78	**2009.77**	-0.0062	2600.00	0.0205
2650.00	2009.61	-	-	#DIV/0!	0.00	2009.61	20.00	2009.09	2009.59	**2009.47**	-0.0104	2650.00	0.0260
2700.00	2009.30	-	-	#DIV/0!	0.00	2009.30	20.00	2008.78	2009.28	**2009.17**	-0.0084	2700.00	0.0255
2750.00	2008.78	-	-	#DIV/0!	0.00	2008.78	20.00	2008.26	2008.76	**2008.75**	-0.0020	2750.00	0.0205
2800.00	2008.68	-	-	#DIV/0!	0.00	2008.68	20.00	2008.16	2008.66	**2008.50**	-0.0002	2800.00	0.0280
2850.00	2008.67	-	-	#DIV/0!	0.00	2008.67	20.00	2008.15	2008.65	**2008.25**	-0.0042	2850.00	0.0400
2900.00	2008.46	-	-	#DIV/0!	0.00	2008.46	20.00	2007.94	2008.44	**2008.00**	-0.0016	2900.00	0.0420
2950.00	2008.38	-	-	#DIV/0!	0.00	2008.38	20.00	2007.86	2008.36	**2008.25**	-0.0020	2950.00	0.0255
3000.00	2008.28	-	-	#DIV/0!	0.00	2008.28	20.00	2007.76	2008.26	**2008.00**	-0.0004	3000.00	0.0330
3050.00	2008.26	-	-	#DIV/0!	0.00	2008.26	20.00	2007.74	2008.24	**2007.75**	-0.0002	3050.00	0.0445
3102.04	2008.25	-	-	#DIV/0!	0.00	2008.25	20.00	2007.73	2008.23	**2008.03**	0.0054	3102.04	0.0300
3195.04	2008.18	-	-	#DIV/0!	0.00	2008.18	20.00	2007.66	2008.16	**2008.16**	-0.0008	3195.04	0.0200
3250.00	2008.39	-	-	#DIV/0!	0.00	2008.39	20.00	2007.87	2008.37	**2007.88**	0.0038	3250.00	0.0445
3300.00	2008.31	-	-	#DIV/0!	0.00	2008.31	20.00	2007.79	2008.29	**2008.28**	-0.0016	3300.00	0.0205
3350.00	2008.10	-	-	#DIV/0!	0.00	2008.10	20.00	2007.58	2008.08	**2008.03**	-0.0042	3350.00	0.0225
3402.02	2007.98	-	-	#DIV/0!	0.00	2007.98	20.00	2007.46	2007.96	**2007.76**	-0.0023	3402.02	0.0300
3500.98	2007.53	-	-	#DIV/0!	0.00	2007.53	20.00	2007.01	2007.51	**2007.50**	-0.0045	3500.98	0.0205
3550.00	2007.27	-	-	#DIV/0!	0.00	2007.27	20.00	2006.75	2007.25	**2007.24**	-0.0053	3550.00	0.0205
3600.00	2007.19	-	-	#DIV/0!	0.00	2007.19	20.00	2006.67	2007.17	**2006.97**	-0.0016	3600.00	0.0300
3658.49	2006.82	-	-	#DIV/0!	0.00	2006.82	20.00	2006.30	2006.80	**2006.60**	-0.0063	3658.49	0.0300
											0.5485		

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: N/A
VERTICAL: N/A

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
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
ROAD CROSS SECTIONS
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C0.3

JOB NUMBER 13-1166

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

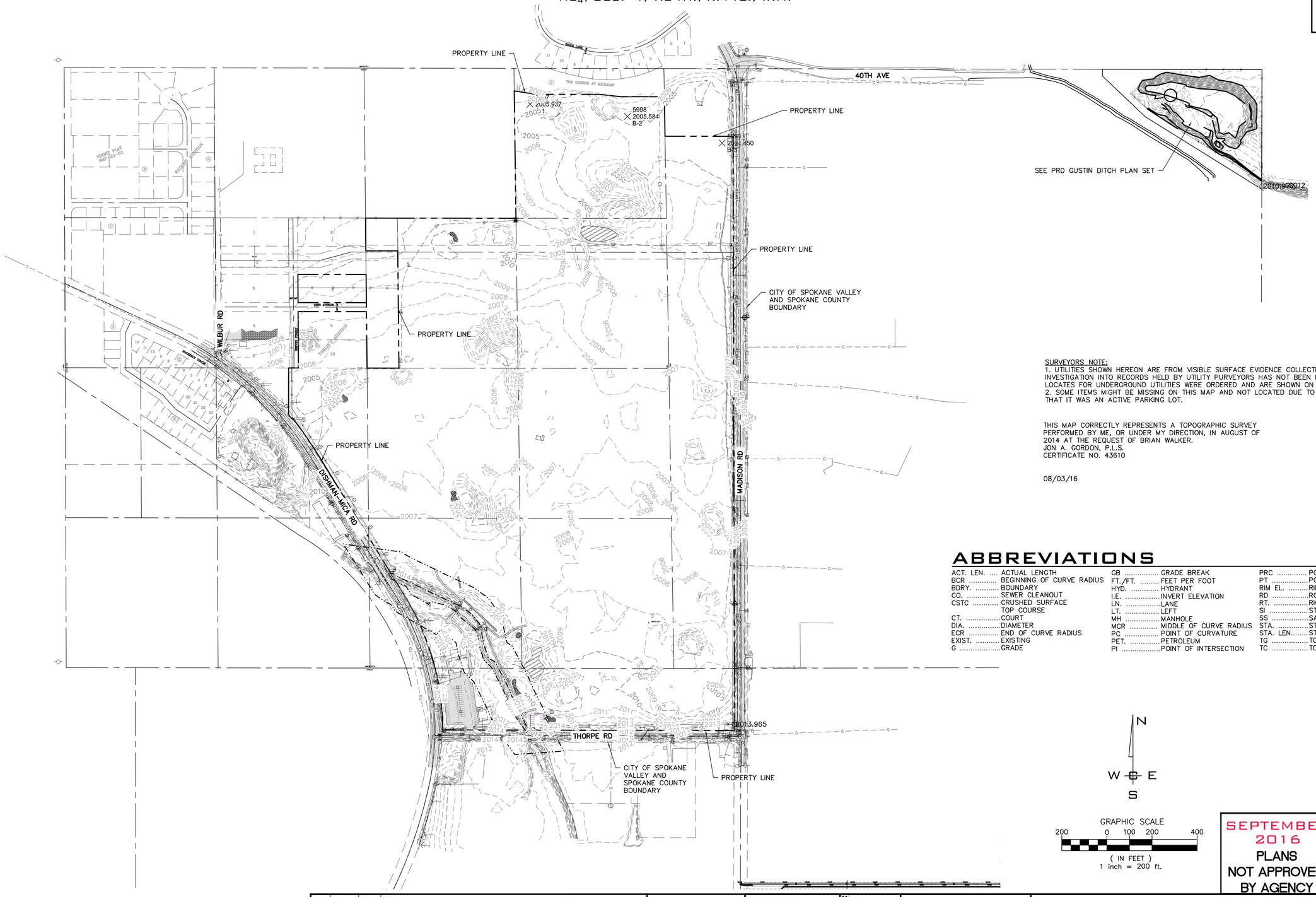
SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE — STATE OF WASHINGTON — 25462 — REGISTERED PROFESSIONAL ENGINEER
10/13/16

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C0.2 CROSS SECTIONS.dwg, 10/13/2016 2:48:43 PM

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 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 TOP COURSE	LN.	LANE	RT.	RIGHT
		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

N
W E
S

GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 ft.

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

JON A. GORDON
STATE OF WASHINGTON
43610
REGISTERED
PROFESSIONAL LAND SURVEYOR

SEPTEMBER
2016
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: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X	CIVIL
	STRUCTURAL
	SURVEYING
	TRAFFIC
	PLANNING
	LANDSCAPE
	OTHER

WCE
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SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

SPOKANE VALLEY PAINTED HILLS PRD
TOPOGRAPHY (REFR. ONLY)
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET
C1.0

JOB NUMBER
13-1166

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SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

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

SURVEYORS NOTE:
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CERTIFICATE NO. 43610

08/03/16

EAGLE LANE
THE GREENS AT MIDILOME
40TH AVE
EP: 39+60.76
PC: 38+09.04
PROPERTY LINE
5998 2005.584 B-2
5999 2004.155 B-3
2005.937 B-1
CITY OF SPOKANE VALLEY AND SPOKANE COUNTY BOUNDARY
MADISON RD
43RD AVENUE
REITES STREET
TOMLIN'S ADDITION
DISHMAN-MICA RD
PC: 33+78.69
N
W E
S
GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 inch = 100 ft.

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- [X] CIVIL
- [ ] STRUCTURAL
- [ ] SURVEYING
- [ ] TRAFFIC
- [ ] PLANNING
- [ ] LANDSCAPE
- [ ] OTHER

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SPOKANE VALLEY PAINTED HILLS PRD
NORTH TOPOGRAPHY (REF. ONLY)
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

JON A. GORDON STATE OF WASHINGTON 43610 REGISTERED PROFESSIONAL LAND SURVEYOR

SHEET C1.1
JOB NUMBER 13-1166

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SE¼, SEC.33, T.25N., R.44E., W.M.
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UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
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CALL TWO BUSINESS DAYS BEFORE YOU DIG

PROPERTY LINE

DISHMAN-MICA RD

CHESTER CREEK 100' BUFFER

EXISTING CLUBHOUSE

CHESTER CREEK

EXISTING PARKING

EXISTING BUILDING

EXISTING PARKING

EXISTING BUILDING

THORPE RD

CITY OF SPOKANE VALLEY AND SPOKANE COUNTY BOUNDARY

CITY OF SPOKANE VALLEY AND SPOKANE COUNTY BOUNDARY

PROPERTY LINE

MADISON RD

PROPERTY LINE

2013.965

N89°55'52"W 2693.22'

S89°55'34"E

N

W E

S

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 inch = 100 ft.

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- [ ] OTHER

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SPOKANE VALLEY, WA 99216
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SOUTH TOPOGRAPHY (REFR. ONLY)
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C1.2

JOB NUMBER 13-1166

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

JON A. GORDON STATE OF WASHINGTON 43610 REGISTERED PROFESSIONAL LAND SURVEYOR

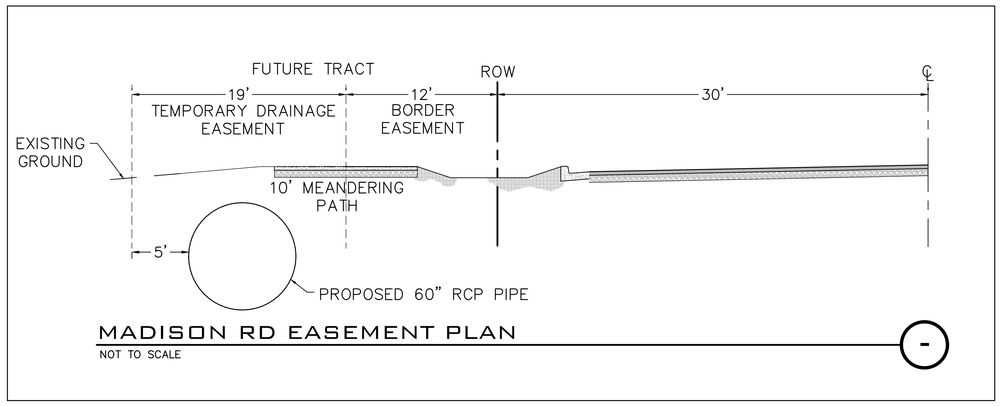
SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GCLDWG\C1.0 TOPOGRAPHY.dwg, 10/13/2016 2:49:58 PM

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

INFILTRATION GALLERIES
2(EA) 36" DISTRIBUTION PIPE
40TH AVENUE
STORAGE AREA #6
TRIANGLE POND INFILTRATION FIELD SEE GUSTIN LEVEE PLAN SET FOR MORE DETAILS
DRAINAGE EASEMENT
BIOSWALE
HEADWALL
ACCESS
HEADWALL
TEMPORARY ACCESS
18" CULVERT
STORAGE AREA #1
60" RCP CONVEYANCE
MADISON ROAD
GUSTIN LEVEE AND DRAINAGE DITCH SEE GUSTIN LEVEE PLAN SET FOR MORE DETAILS
HIGHWAY 27
EXISTING 36"CULVERT
WILBER ROAD
PROPOSED LEVEE
PROPOSED LEVEE
18" CULVERT
60" RCP CONVEYANCE
TEMPORARY DRAINAGE EASEMENT
DISHMAN-MICA ROAD
PROPOSED LEVEE
18" CULVERT
PROPOSED LEVEE
EXISTING LEVEE
60" RCP CONVEYANCE
CHESTER CREEK
100' STREAM BUFFER
EXISTING BOX CULVERT
EXISTING LEVEE
STREAM BUFFER IMPACT MITIGATION AREA
CHESTER CREEK
18" CULVERT
HEADWALL
100' STREAM BUFFER
DRAINAGE EASEMENT
48" RCP CONVEYANCE
CHESTER CR. BOX CULVERT EXTENSION
THORPE ROAD
CONCRETE CHANNEL
2 EXISTING 10" CULVERTS
CHESTER CREEK
THORPE RD BOX CULVERT 30'W X3'H BOX CULVERT

N
W E
S
GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1 inch = 200 ft.



MADISON RD EASEMENT PLAN
NOT TO SCALE

DATUM: NAVD - 88
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REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
OTHER

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SITE ELEMENT PLAN
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C1.3
JOB NUMBER 13-1166

Spokane County Permit No.:
Floodplain-Grading-
City of Spokane Valley Permit No.:
SUB-2015-0001
FPD-2016-
EGR-201X-XXXX

City of Spokane Valley Development Engineering
Reviewer: _____
New Street Miles – Public: _____
☐ Not Reviewed
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Acceptance Comments

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C1.3 ELEMENT PLAN.dwg, 10/13/2016 2:50:16 PM

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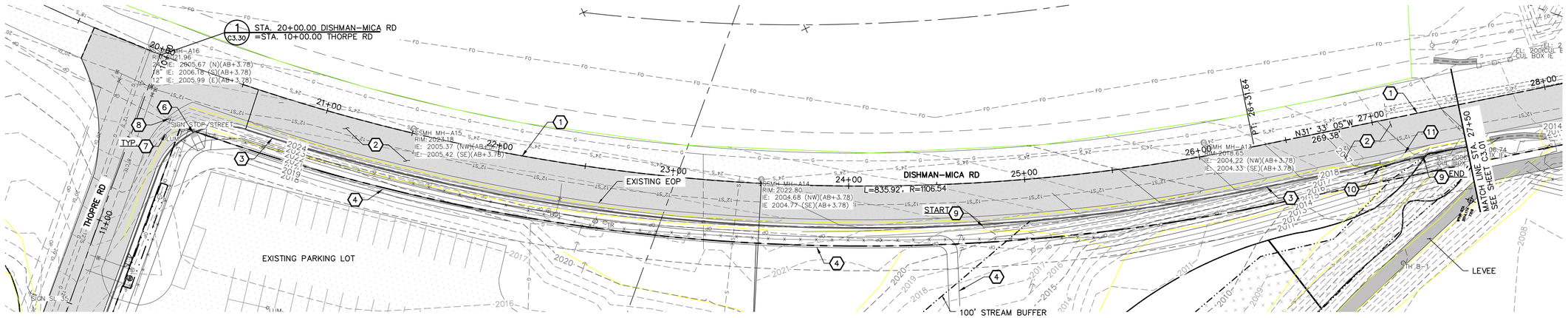
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

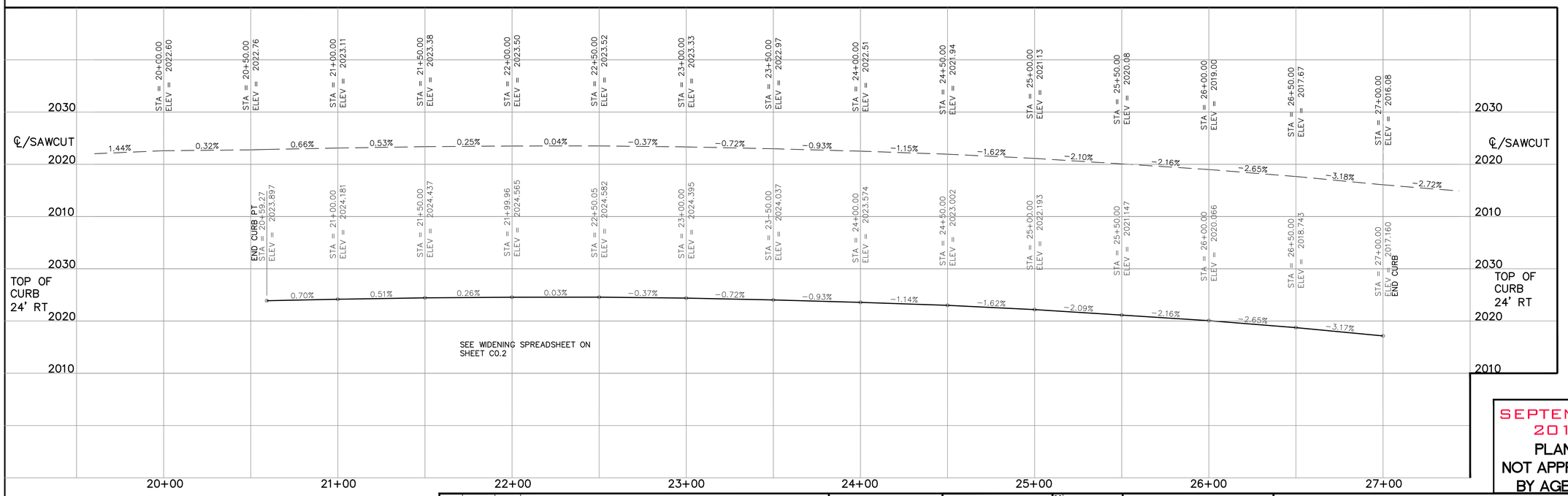
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

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, SEE SHEET C0.2.
3. PROVIDE AND INSTALL TYPE "B" CURB AND GUTTER SPILL PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102 & GENERAL NOTE 8.
4. PROVIDE AND INSTALL 6' WIDE CONCRETE SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
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. EXISTING SIGN TO BE RELOCATED TO MAINTAIN 2' OF CLEARANCE FROM BACK OF CURB PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
9. REMOVE EXISTING GUARD RAIL.
10. REUSE 35' OF GUARDRAIL AND REPLACE POSTS PER WSDOT STANDARD PLAN C-2A. CONNECT TO GUARDRAIL AT SOUTH END OF CULVERT.
11. TAPER TO MATCH EXISTING ASPHALT.





DATUM: NAVD - 88

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VERTICAL: 1"=10'

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REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
OTHER

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SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

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DISHMAN-MICA PLAN & PROFILE
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C3.00

JOB NUMBER 13-1166

City of Spokane Valley
Development Engineering
Reviewer: _____
New Street Miles – Public: _____
☐ Not Reviewed
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Date Accepted _____
Acceptance Comments

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

SEPTEMBER 2016
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P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C3.0 DISHMAN-MICA RD.dwg, 10/13/2016 2:54:01 PM

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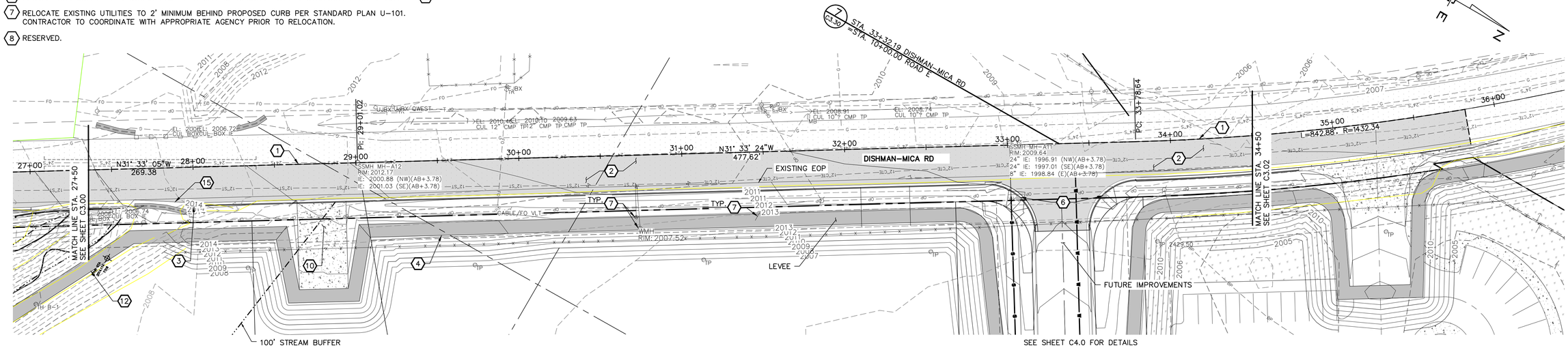
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

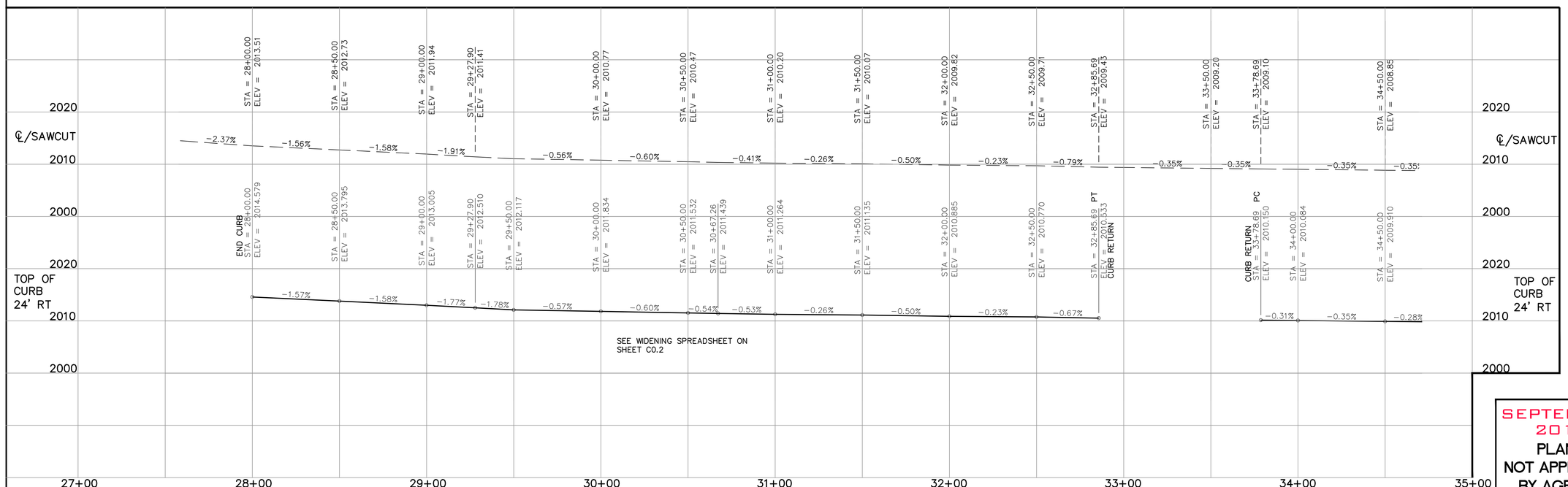
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

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 1 SHEET C3.3.
3. PROVIDE AND INSTALL TYPE B CURB AND GUTTER PER CITY OF SPOKANE VALLEY STANDARD PLAN R-102.
4. PROVIDE AND INSTALL 8' WIDE ASPHALT PATHWAY PER CITY OF SPOKANE VALLEY STANDARDS.
5. PROVIDE AND INSTALL 4' WIDE, TYPE 1 CURB DROP PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110.
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 COMMERCIAL DRIVEWAY PER SPOKANE VALLEY STANDARD PLAN R-113.
11. RESERVED
12. CONSTRUCT PATH ON TOP OF EXISTING LEVEE. SEE SHEET C5.0.
13. RESERVED
14. RESERVED
15. TAPER TO MATCH EXISTING ASPHALT.





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PH: 509-893-2617 FAX: 509-926-0227

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DISHMAN-MICA PLAN & PROFILE
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

City of Spokane Valley
Development Engineering
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SEPTEMBER 2016
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TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

SHEET C3.01
JOB NUMBER 13-1166

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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 166' TAPER FROM FACE OF PROPOSED CURB TO EXISTING EDGE OF ASPHALT PER TAPER CALCULATIONS, THIS SHEET.
10. PROVIDE AND INSTALL 33' COMMERCIAL DRIVEWAY PER SPOKANE VALLEY STANDARD PLAN R-113.

TAPER CALCULATIONS

L=W(S)²/60

4.9(45²)/60=166' (DEPARTING)

UNDERGROUND SERVICE ALERT
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GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
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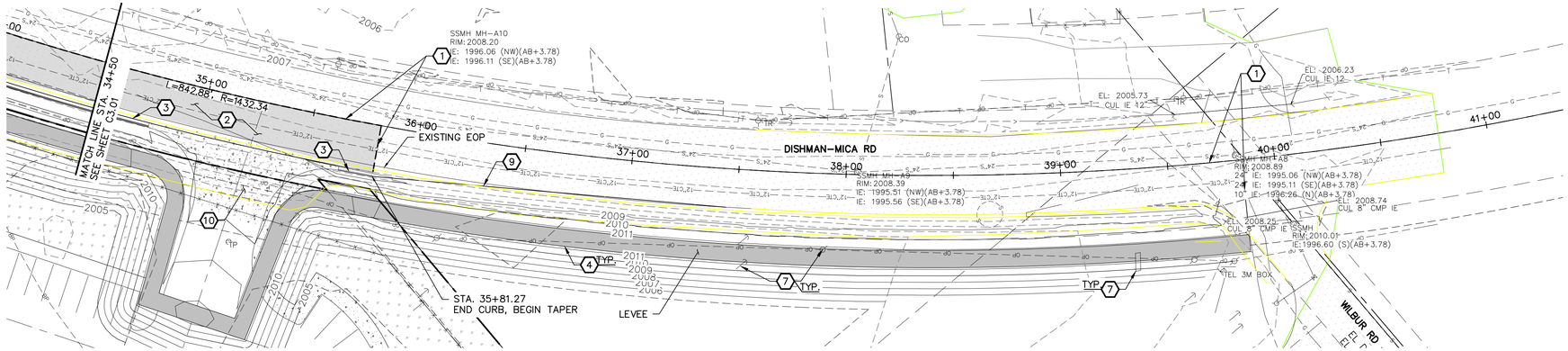

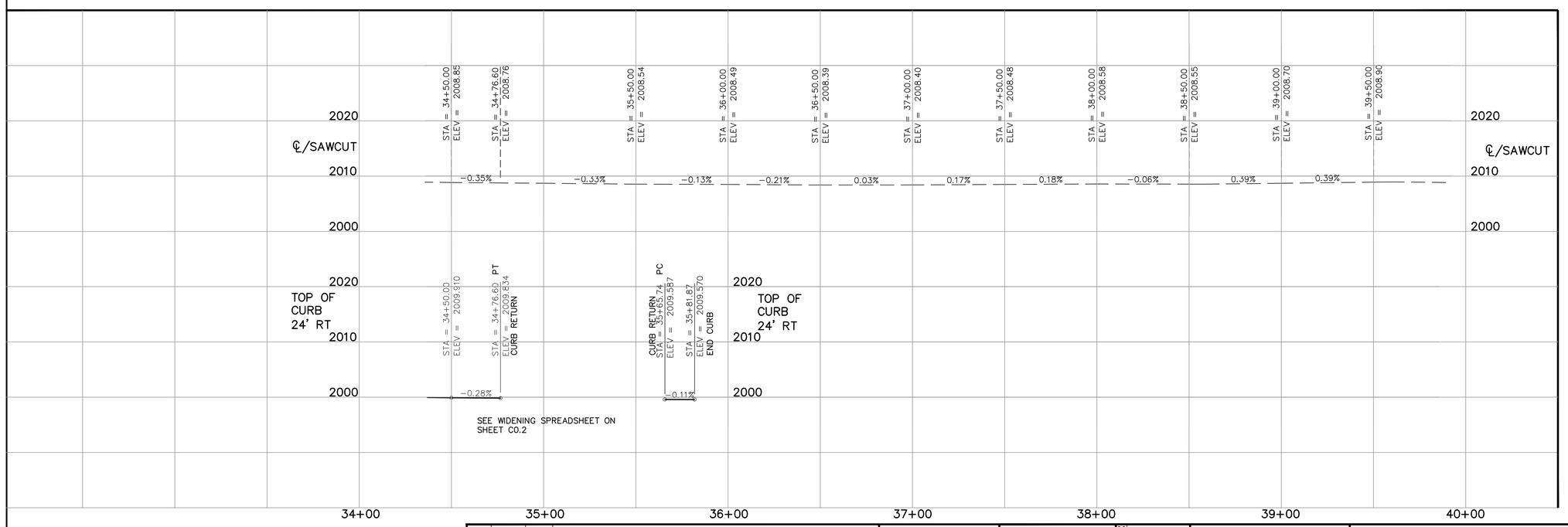

SEE WIDENING SPREADSHEET ON SHEET C0.2

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DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C3.02

JOB NUMBER 13-1166

City of Spokane Valley
Development Engineering
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New Street Miles – Public: _____
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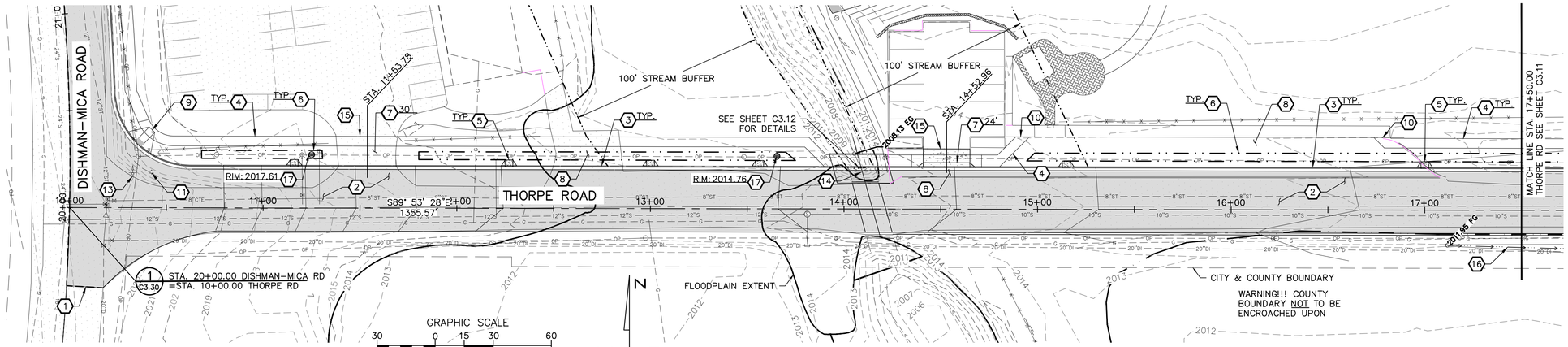
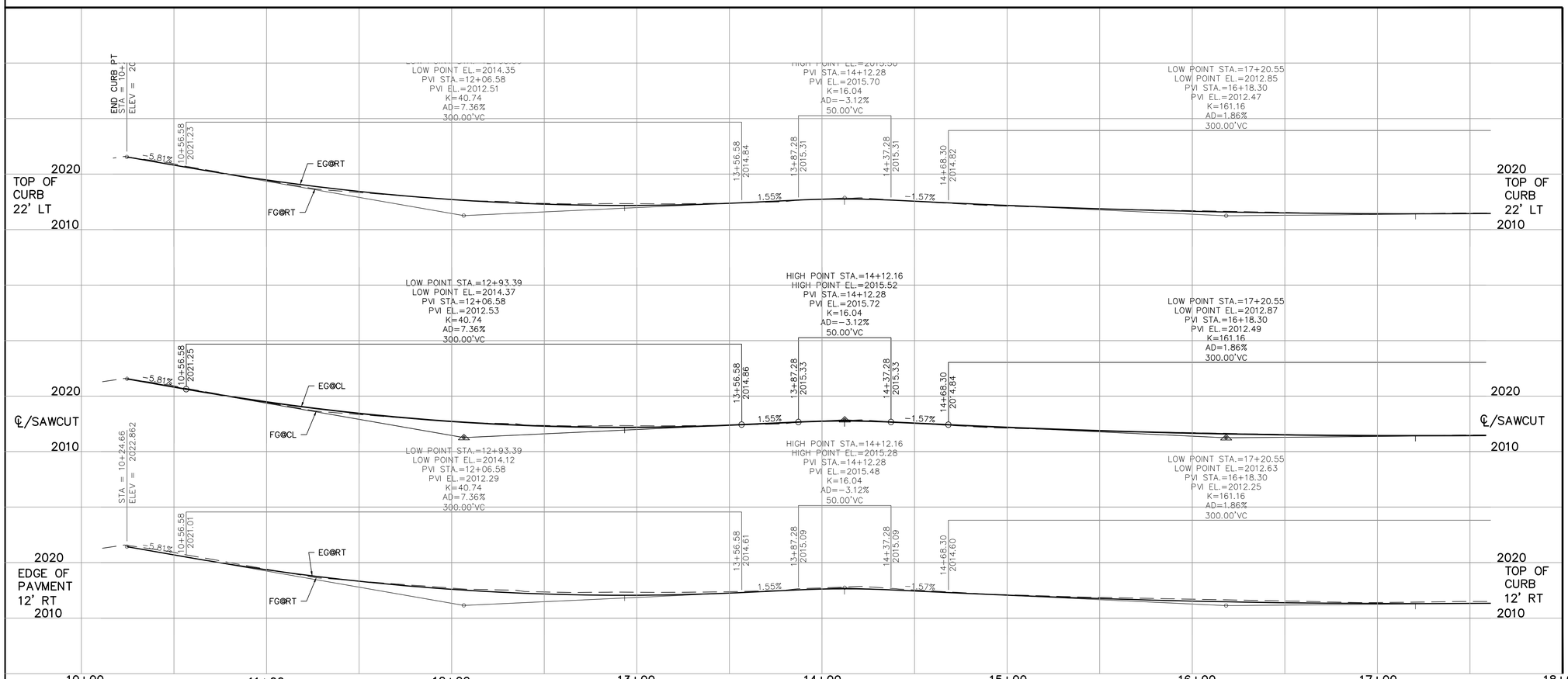
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C3.0 DISHMAN-MICA RD.dwg, 10/13/2016 2:55:08 PM

SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, 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. 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 3 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 DROP PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110.
6. CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130.
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. RESERVED
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. RESERVED
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 TYPE B DRYWELL PER CITY OF SPOKANE VALLEY STANDARD PLAN S-101. SEE PLAN VIEW FOR RIM ELEVATIONS.

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"=30'
VERTICAL: 1"=10'

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
OTHER

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

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

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

SHEET C3.10

JOB NUMBER 13-1166

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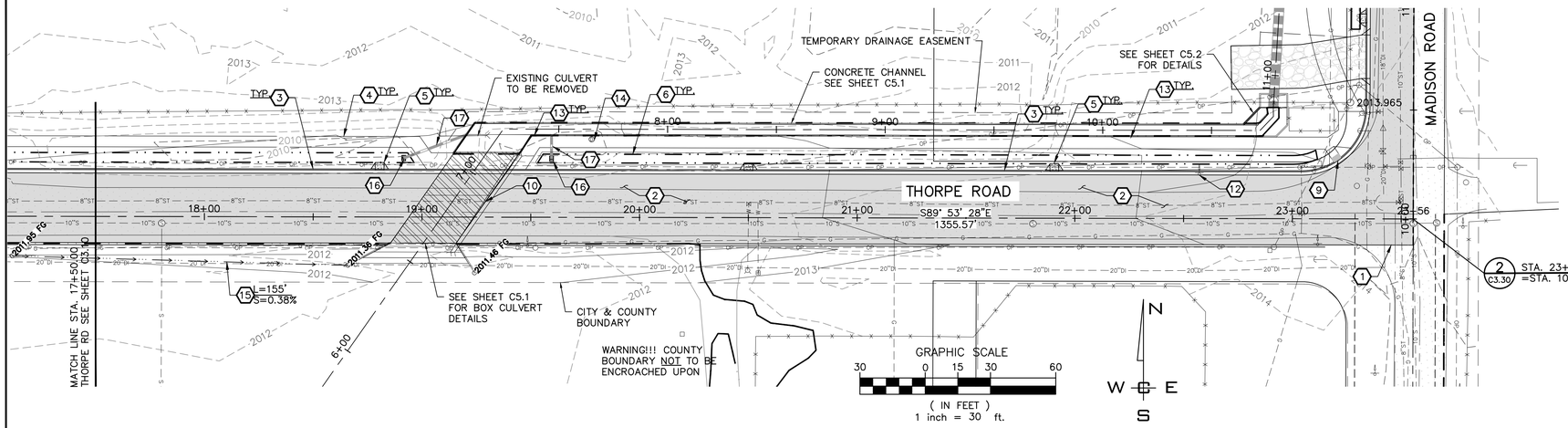
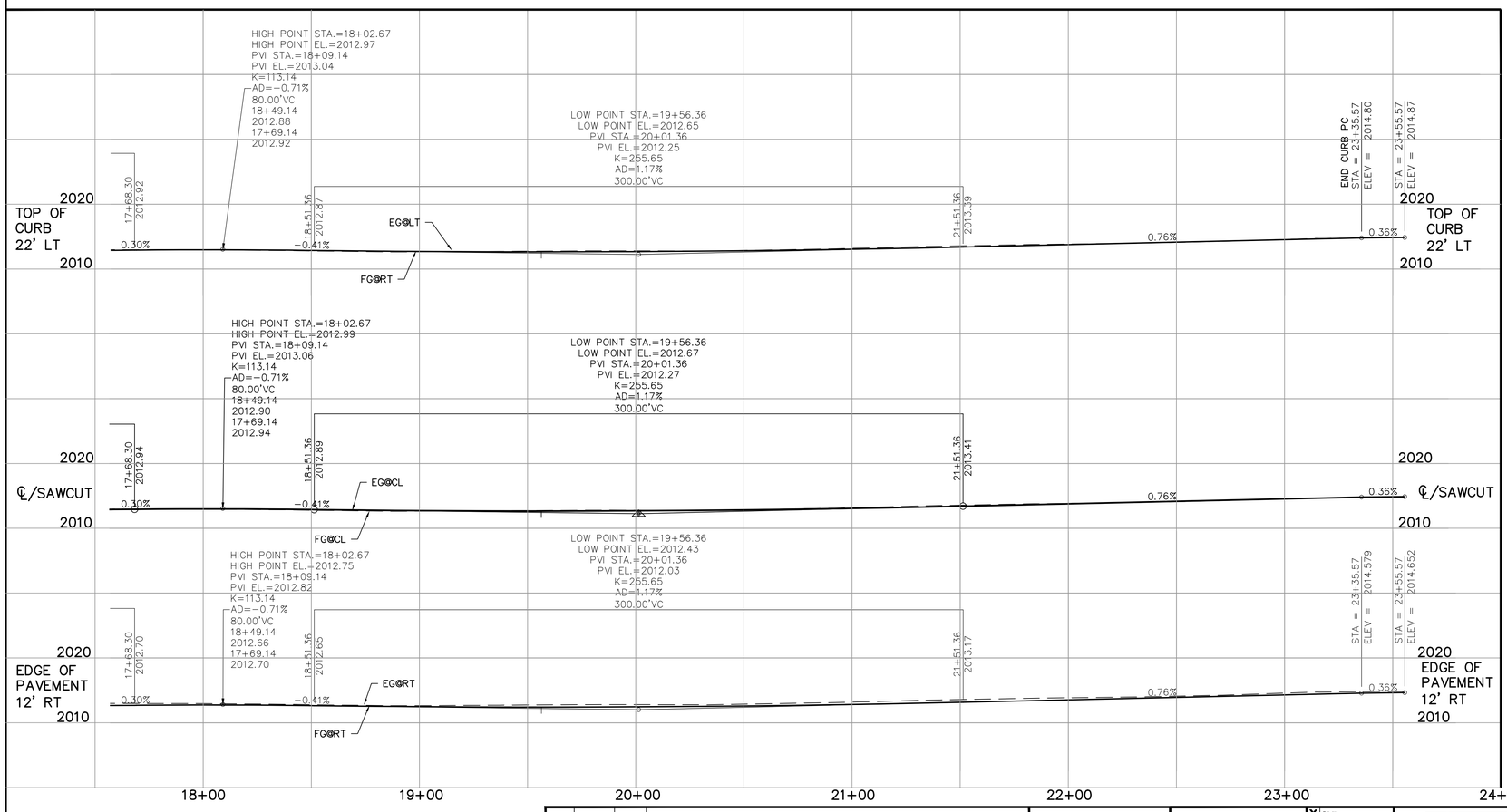


CONSTRUCTION NOTES

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 C0.2.
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 DROP PER CITY OF SPOKANE VALLEY STANDARD PLAN S-110.
6. CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130.
7. RESERVED
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.
15. CONSTRUCT V-DITCH. SEE PLAN FOR ELEVATIONS.
16. PROVIDE AND INSTALL TYPE I CATCH BASIN WITH FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE SHEET C5.1 FOR DETAILS.
17. PROVIDE AND INSTALL 12" CMP PIPE PER CITY SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE SHEET C5.1 FOR DETAILS.



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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PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
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PH: 509-893-2617 FAX: 509-926-0227

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

SHEET C3.11

JOB NUMBER 13-1166

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

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SW¼, SEC.34, T.25N., R.44E., W.M.
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UNDERGROUND SERVICE ALERT
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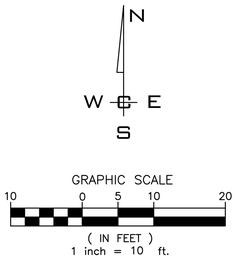
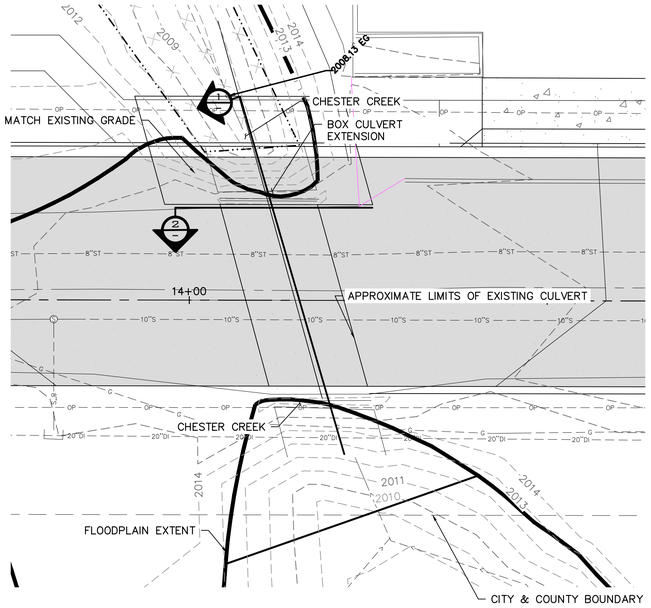
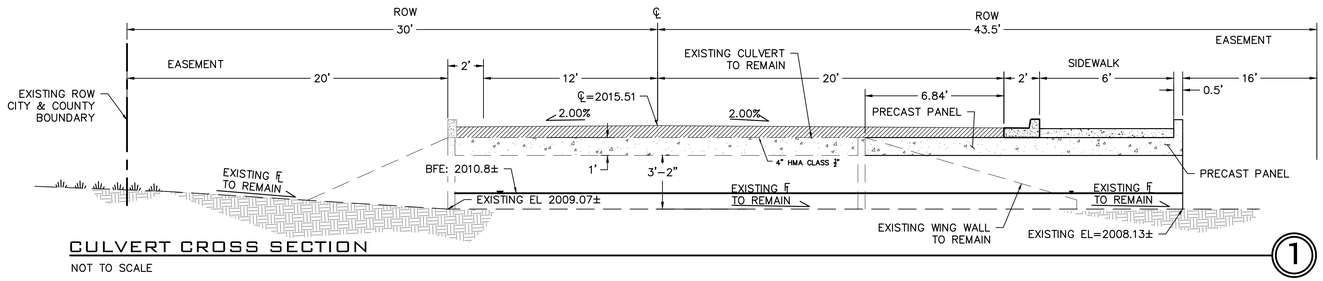
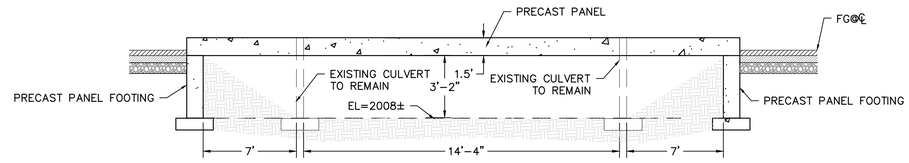






CULVERT CROSS SECTION ①
NOT TO SCALE



CULVERT CROSS SECTION ②
NOT TO SCALE

A

CHESTER CREEK BOX CULVERT WIDENING

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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SCALE:
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VERTICAL: N/A

PROJ #: 13-1166
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- [ ] STRUCTURAL
- [ ] SURVEYING
- [ ] TRAFFIC
- [ ] PLANNING
- [ ] LANDSCAPE
- [ ] OTHER

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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

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
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Acceptance Comments

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STATE OF WASHINGTON
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10/13/16

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UNDERGROUND SERVICE ALERT
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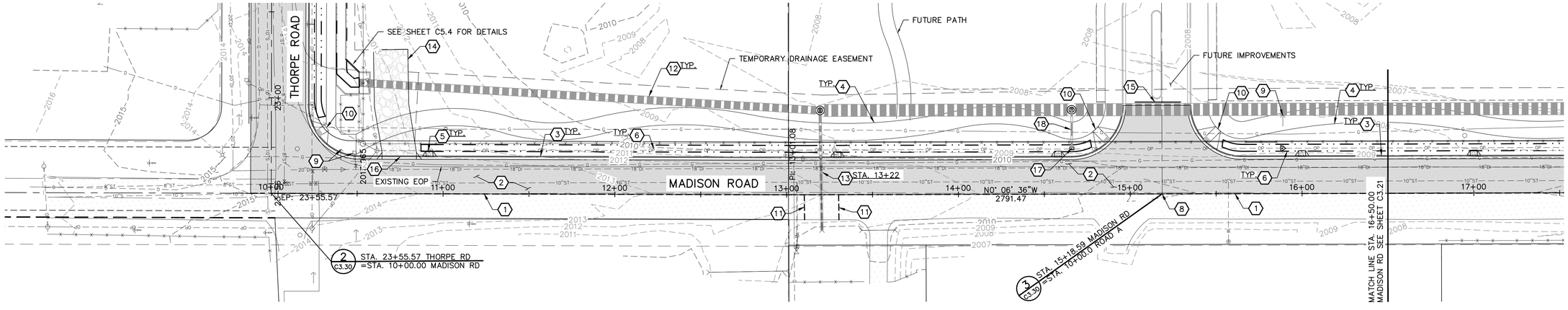
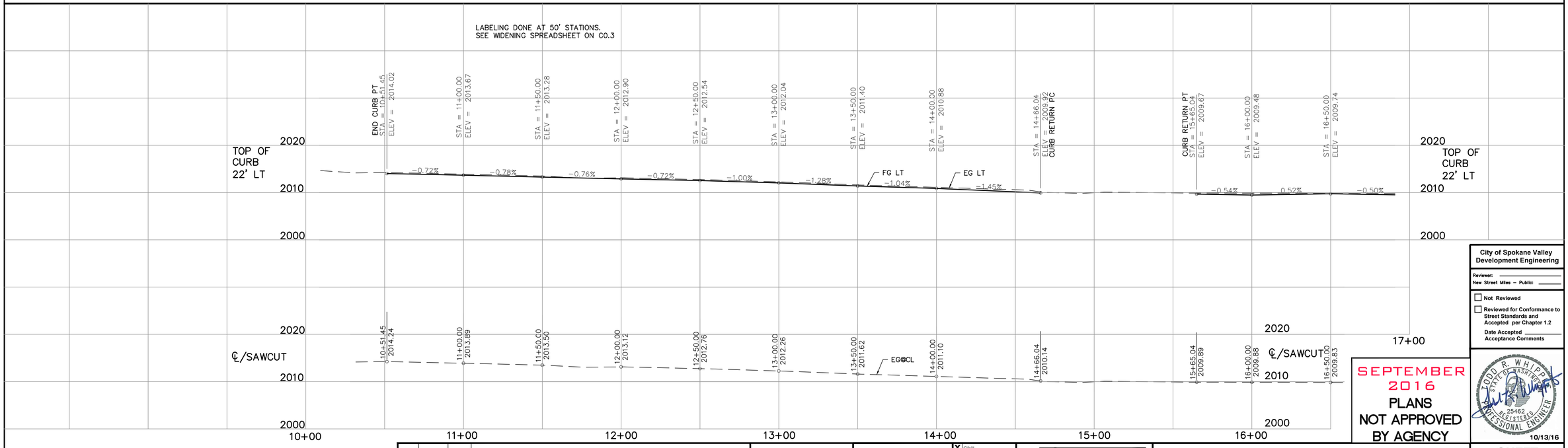
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

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.
6. CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130.
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. MAINTAIN 48" CLEARANCE IF STRUCTURE IS 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 RCP STORM PIPE. SEE SHEET C5.
13. REPLACE EXISTING CULVERT AND EXTEND WITH 18" CMP. SEE SHEET C3.24 FOR DETAILS.
14. CONSTRUCT 20' WIDE CHANNEL ACCESS. 6" CSTC ON COMPACTED (95%) SUBGRADE.
15. INSTALL TYPE III BARRICADE PER CITY OF SPOKANE VALLEY STANDARD PLAN R-142.
16. PROVIDE AND INSTALL 20' DRIVEWAY PER SPOKANE VALLEY STANDARD PLAN R-113.
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.





DATUM: NAVD - 88

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X CIVIL
STRUCTURAL
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LANDSCAPE
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2528 NORTH SULLIVAN ROAD
SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

City of Spokane Valley
Development Engineering
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Acceptance Comments

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

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

SHEET C3.20
JOB NUMBER 13-1166

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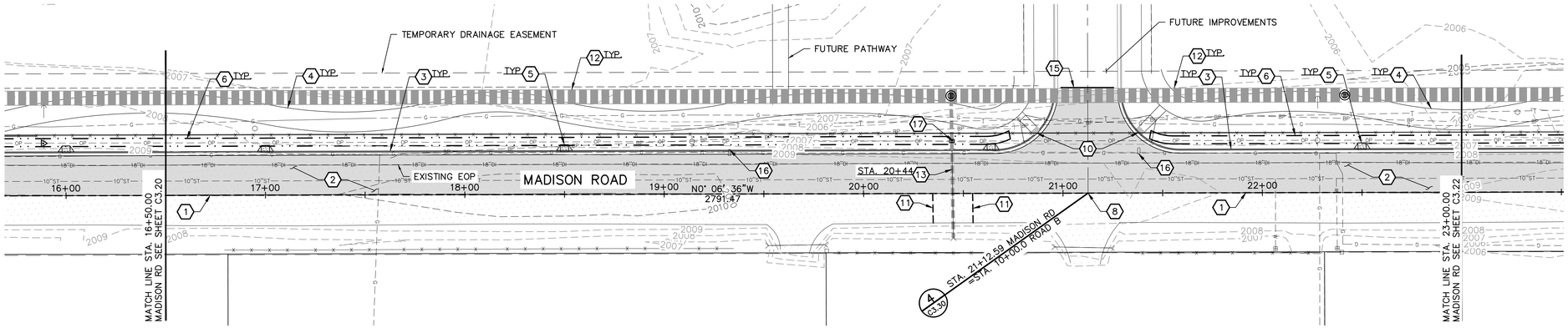
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG

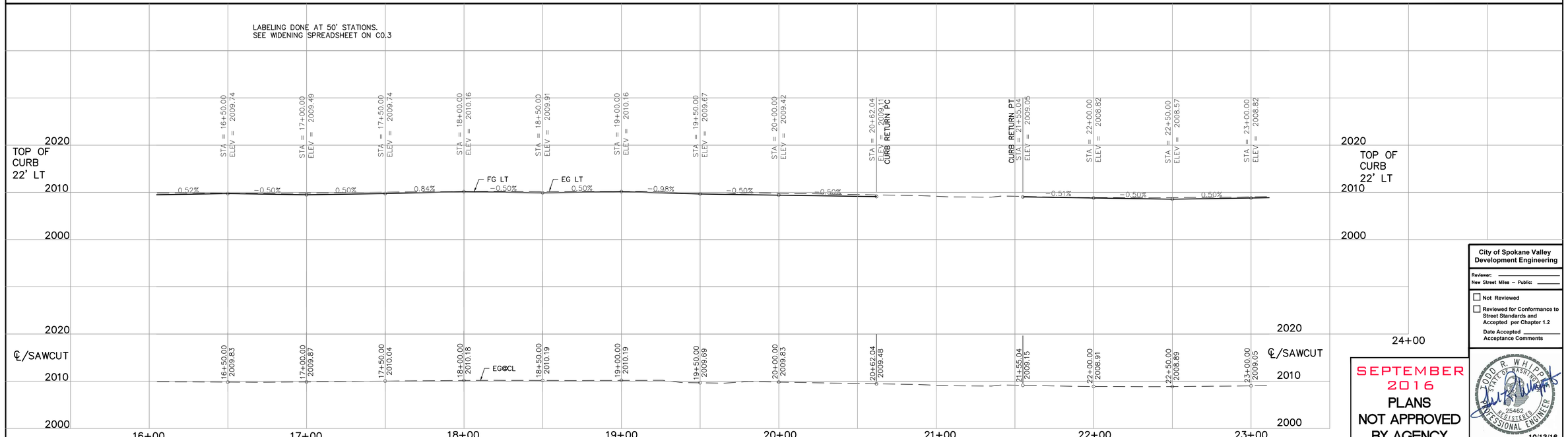
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

N W E S

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.
6. CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130.
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. MAINTAIN 48" CLEARANCE IF STRUCTURE IS 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. RESERVED.
13. REPLACE EXISTING CULVERT AND EXTEND WITH 18" CMP. SEE SHEET C3.24 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.





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10/13/16

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MADISON ROAD PLAN AND PROFILE
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C3.21

JOB NUMBER 13-1166

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(IN FEET)
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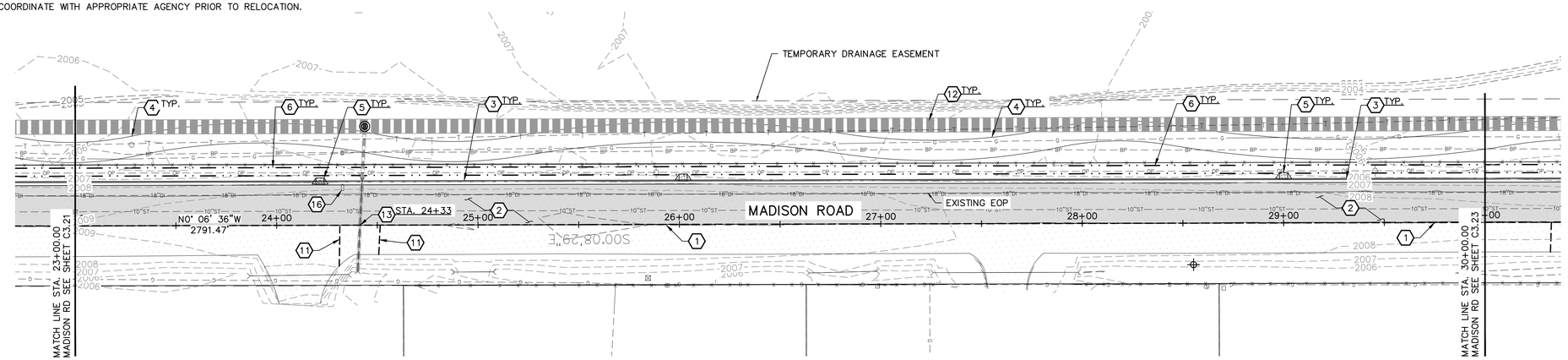
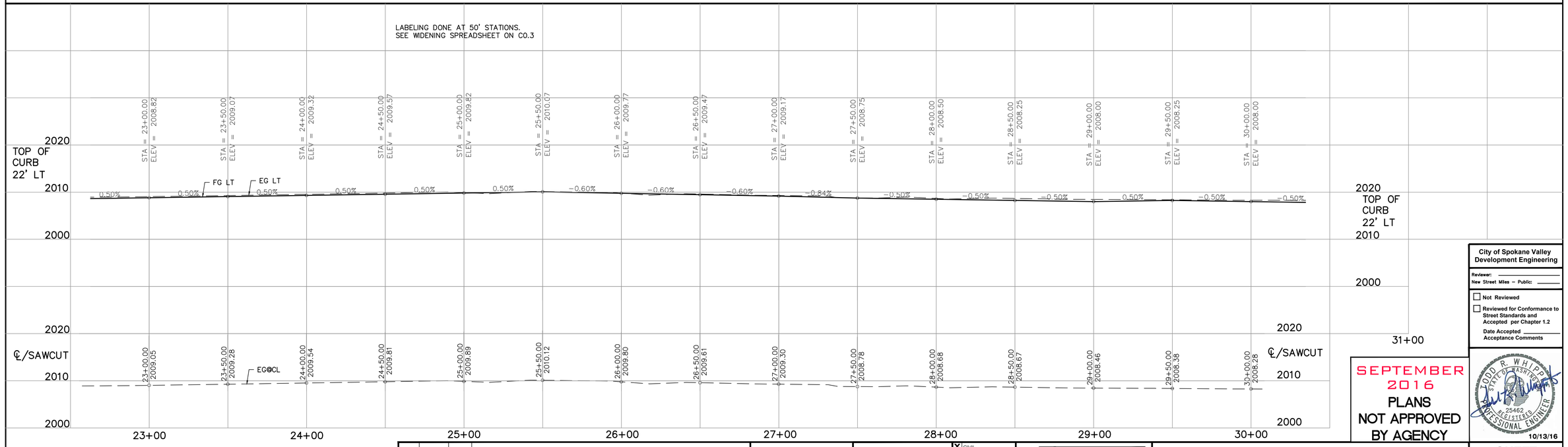
16. EXISTING MAILBOX TO BE RELOCATED.





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"=30'
VERTICAL: 1"=10'

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: TEW
REVIEWED: TRW

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- [ ] STRUCTURAL
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- [ ] PLANNING
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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
MADISON ROAD PLAN AND PROFILE
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C3.22
JOB NUMBER 13-1166

City of Spokane Valley
Development Engineering
Reviewer: _____
New Street Miles – Public: _____
☐ Not Reviewed
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Date Accepted _____
Acceptance Comments

TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C3.2 MADISON RD.dwg, 10/13/2016 2:58:08 PM

SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
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UNDERGROUND SERVICE ALERT
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811
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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.
6. CONSTRUCT ROADSIDE SWALE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-130.
7. PROVIDE AND INSTALL 67' TAPER FROM FACE OF PROPOSED CURB TO EXISTING EDGE OF ASPHALT PER TAPER CALCUALTIONS, 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. MAINTAIN 48" CLEARANCE IF STRUCTURE IS 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 60" RCP PIPE. SEE SHEET C5.3 FOR DETAILS.
13. REPLACE EXISTING CULVERT AND EXTEND WITH 18" CMP. SEE SHEET C3.24 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 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.

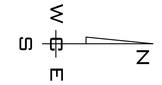
TAPER CALCULATIONS

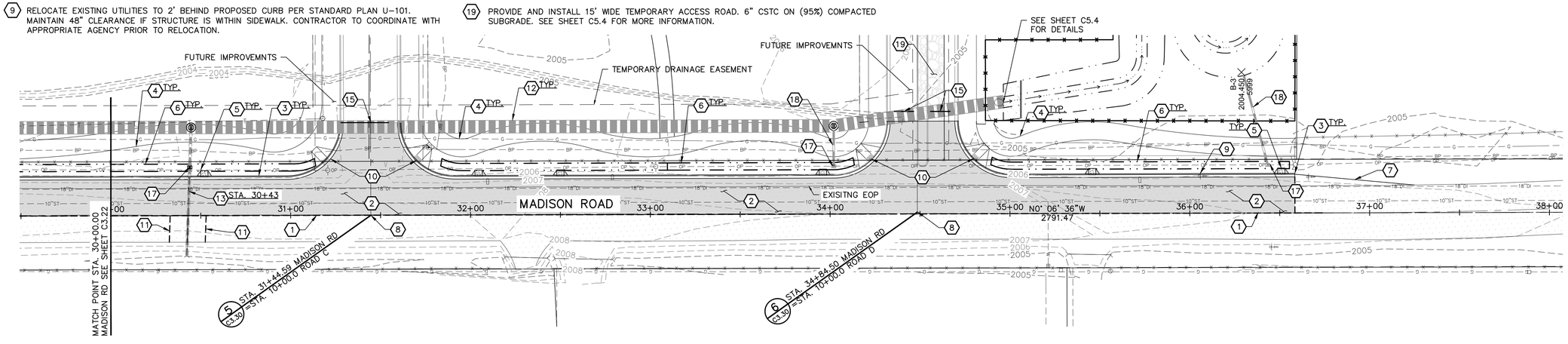
$L=W(S)^2/60$

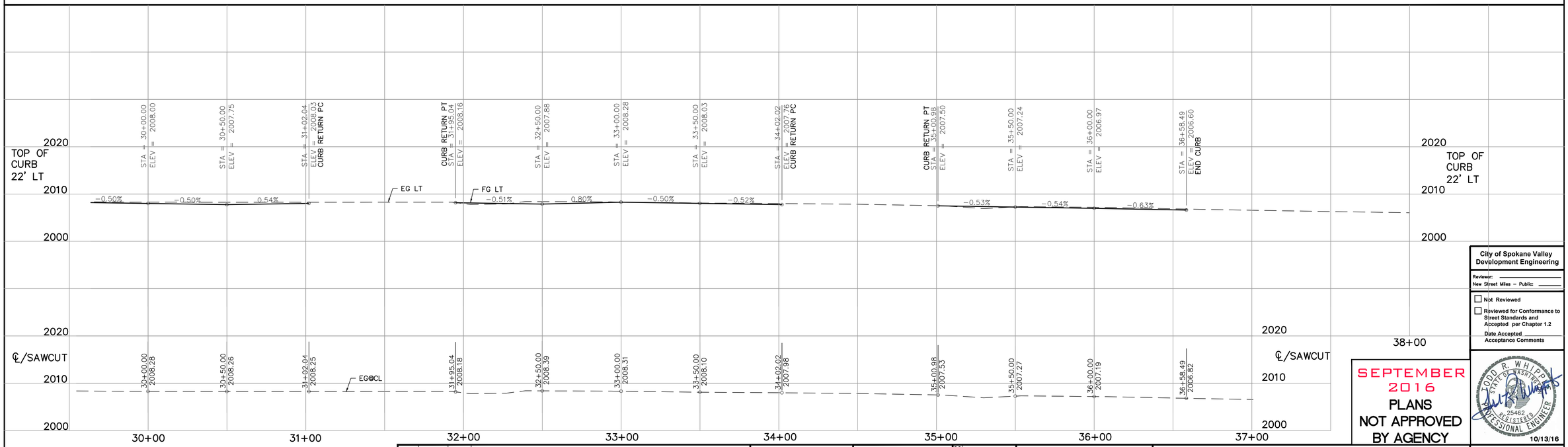
$6.5(35^2)/60=133'$ (DEPARTING)

$133'/2=67'$ (ARRIVING)

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.







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

City of Spokane Valley
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10/13/16

SHEET C3.23

JOB NUMBER 13-1166

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UNDERGROUND SERVICE ALERT
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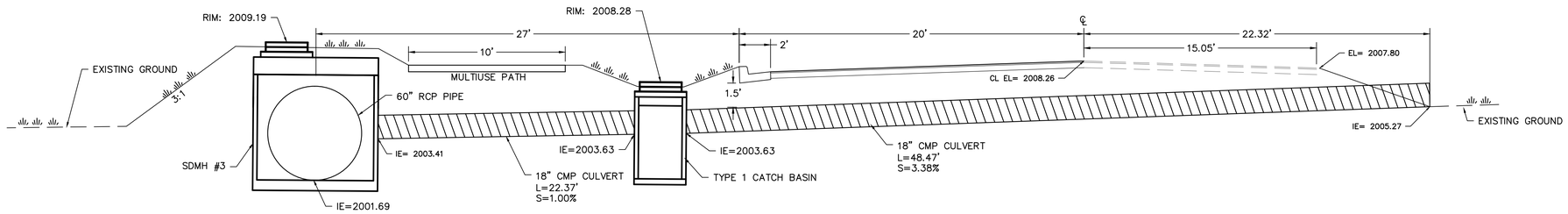
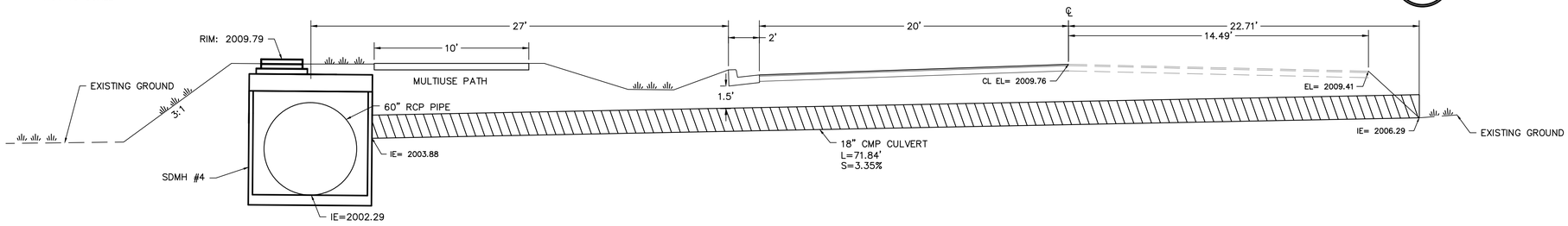
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.



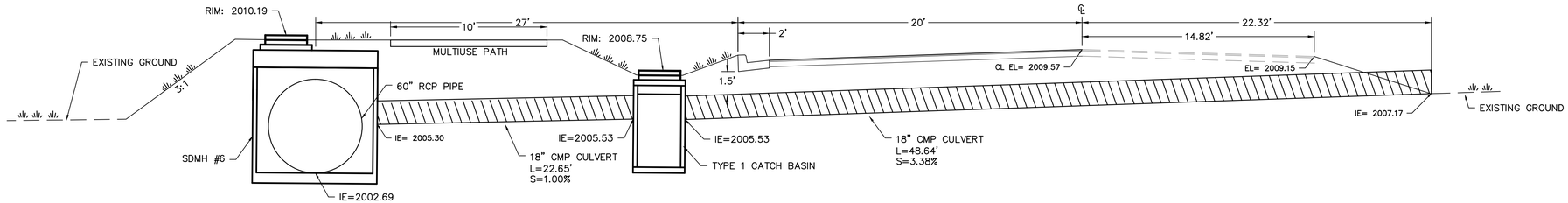
MADISON RD PIPE CROSSING — A

MADISON STA 30+43
NOT TO SCALE



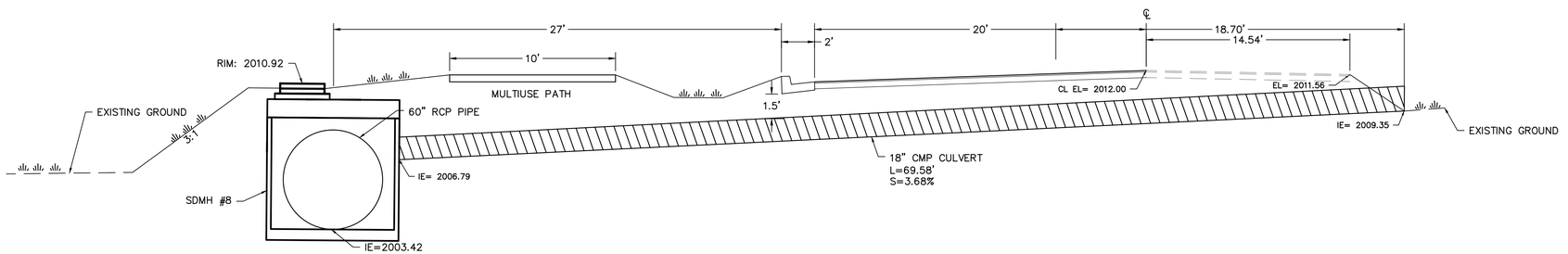
MADISON RD PIPE CROSSING — B

MADISON STA 24+43
NOT TO SCALE



MADISON RD PIPE CROSSING — C

MADISON STA 20+44
NOT TO SCALE



MADISON RD PIPE CROSSING — D

MADISON STA 13+22
NOT TO SCALE

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PH: 509-893-2617 FAX: 509-926-0227

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

SHEET
C3.24

JOB NUMBER
13-1166

City of Spokane Valley
Development Engineering
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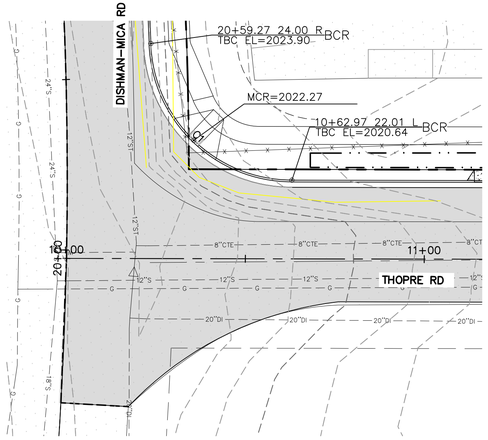
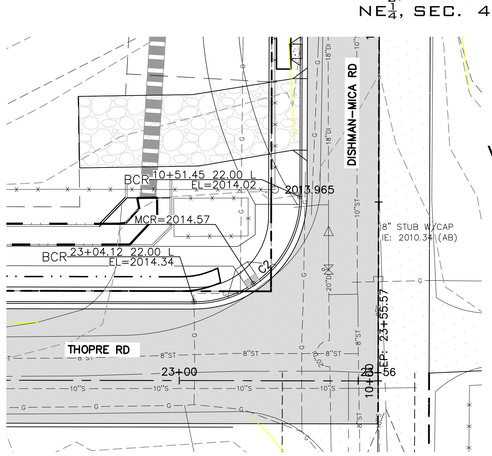


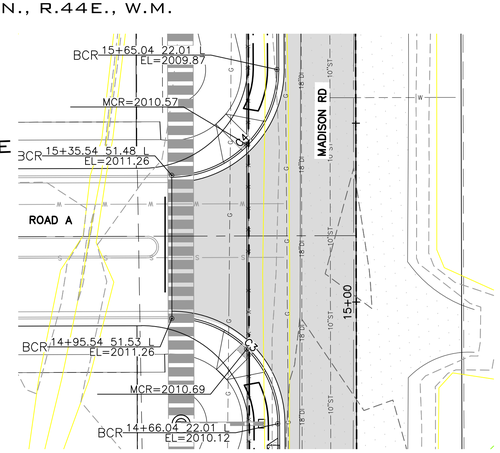
INTERSECTION DETAIL 1

DISHMAN-MICA RD AND THORPE RD
SCALE: 1" = 20'
STA 20+00 DISHMAN-MICA RD TO STA 10+00 THORPE RD



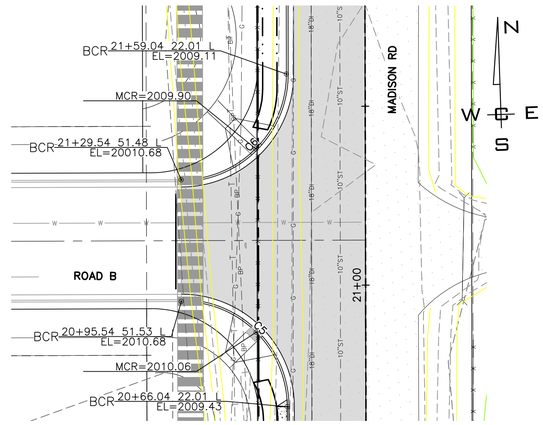
INTERSECTION DETAIL 2

MADISON RD AND THORPE RD
SCALE: 1" = 20'
STA 23+55.57 THORPE RD TO STA 10+00.00 MADISON RD



INTERSECTION DETAIL 3

MADISON RD AND ROAD A
SCALE: 1" = 20'
STA 15+18.59 MADISON RD TO STA 10+00 ROAD A



INTERSECTION DETAIL 4

MADISON RD AND ROAD B
SCALE: 1" = 20'
STA 21+12.59 MADISON RD TO STA 10+00 ROAD B

INTERSECTION DETAIL 5

MADISON RD AND ROAD C
SCALE: 1" = 20'
STA 31+44.59 MADISON RD TO STA 10+00.00 ROAD C

INTERSECTION DETAIL 6

MADISON RD AND ROAD D
SCALE: 1" = 20'
STA 34+84.50 MADISON RD TO STA 10+00 ROAD D

INTERSECTION DETAIL 7

DISHMAN-MICA RD AND ROAD E
SCALE: 1" = 20'
STA 33+32.19 DISHMAN-MICA RD TO STA 10+00 ROAD E

Curve Table			
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

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

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VERTICAL: N/A

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PH: 509-893-2617 FAX: 509-926-0227

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

SHEET C3.30

JOB NUMBER 13-1166

City of Spokane Valley
Development Engineering
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STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

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UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
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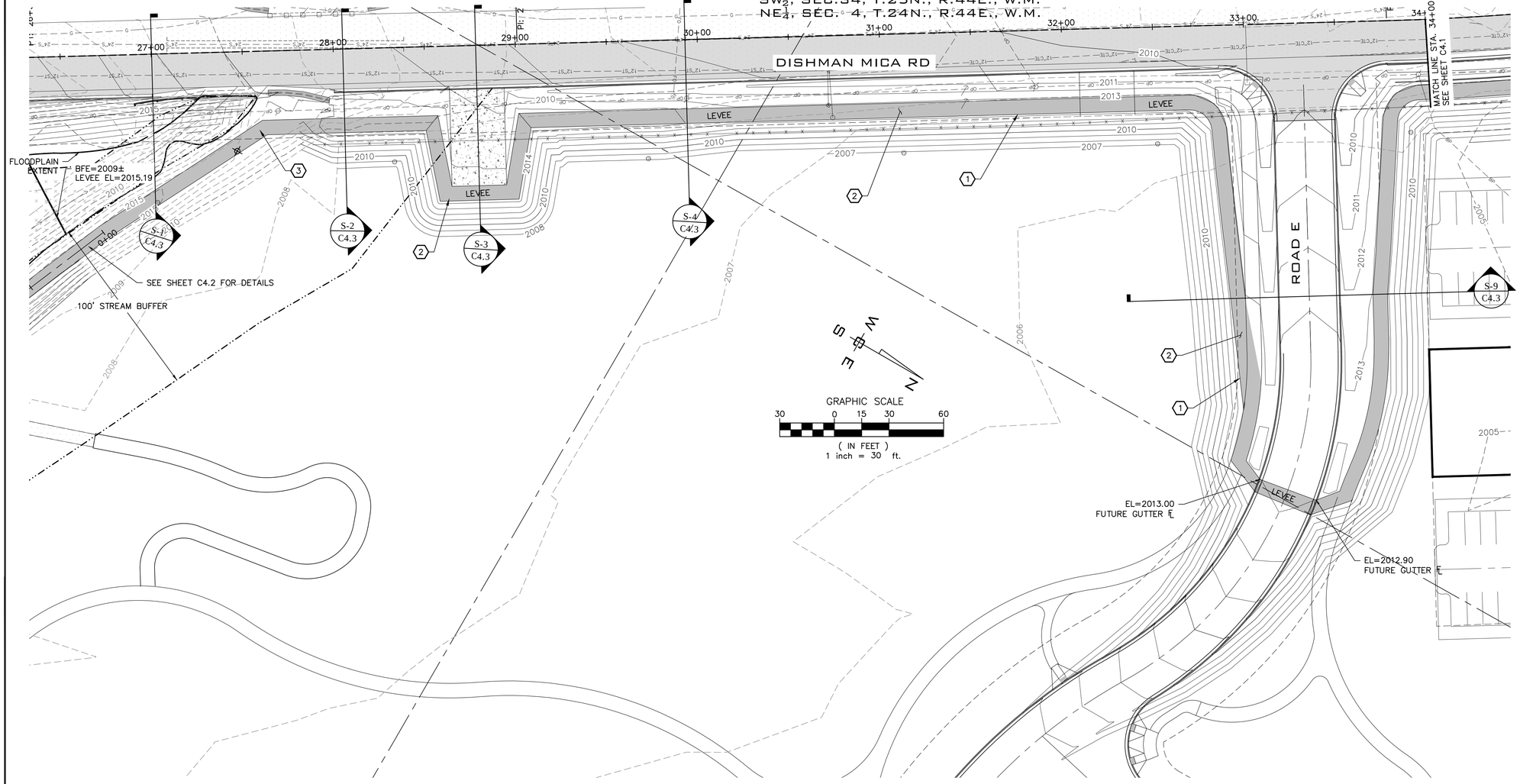

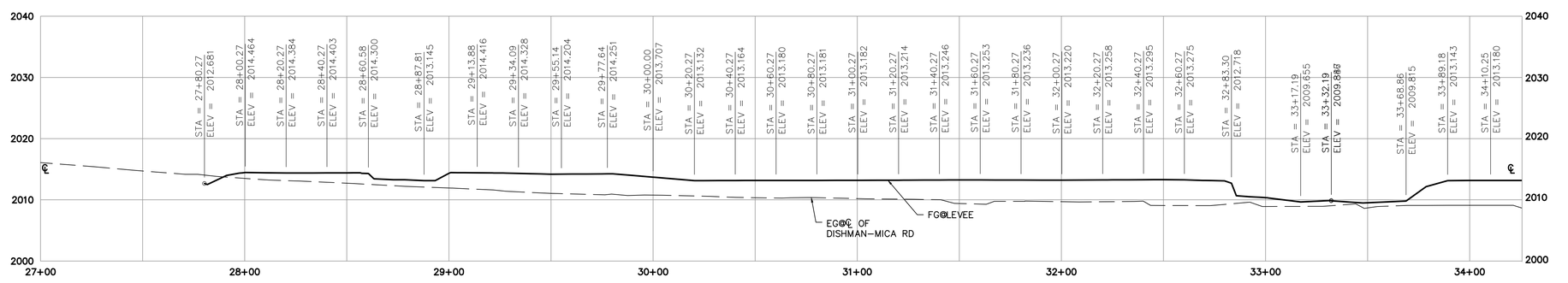

CONSTRUCTION NOTES

1. PROVIDE AND INSTALL 8' WIDE ASPHALT PATHWAY PER CITY OF SPOKANE VALLEY STANDARDS.
2. CONSTRUCT LEVEE PER DETAIL A, SEE SHEET C4.1.
3. CONNECT TO EXISTING LEVEE.

DATUM: NAVD - 88

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PH: 509-893-2617 FAX: 509-926-0227

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

SHEET C4.0

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City of Spokane Valley
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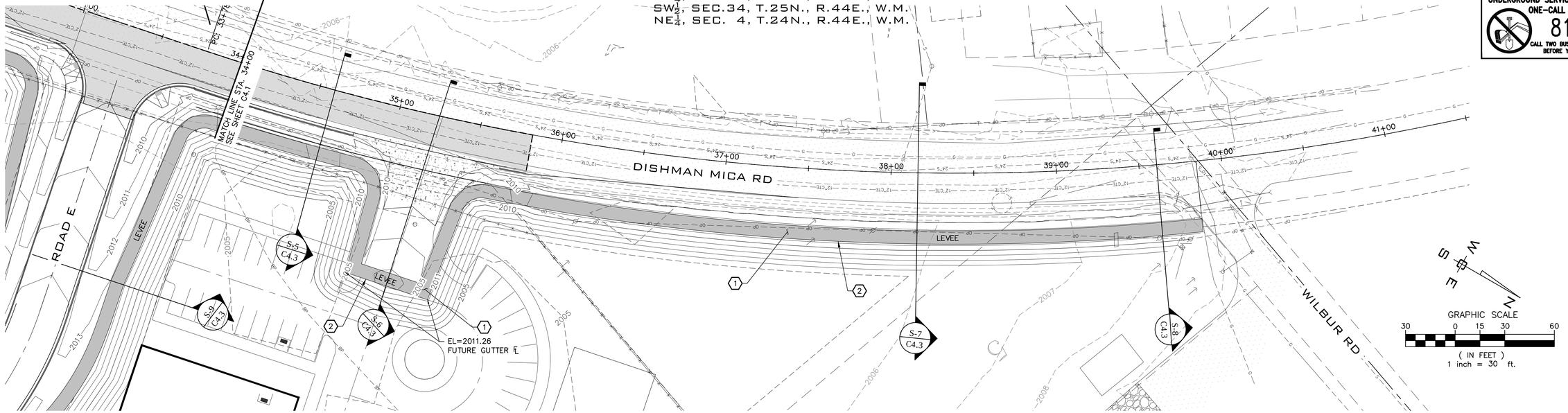

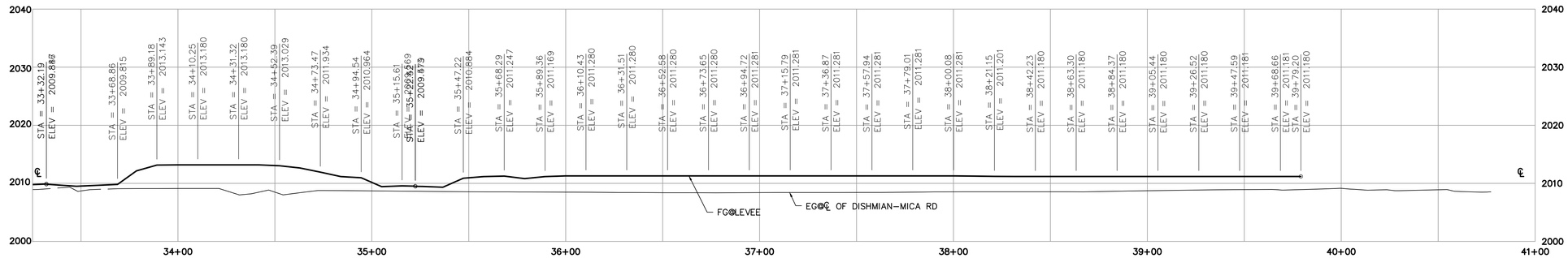

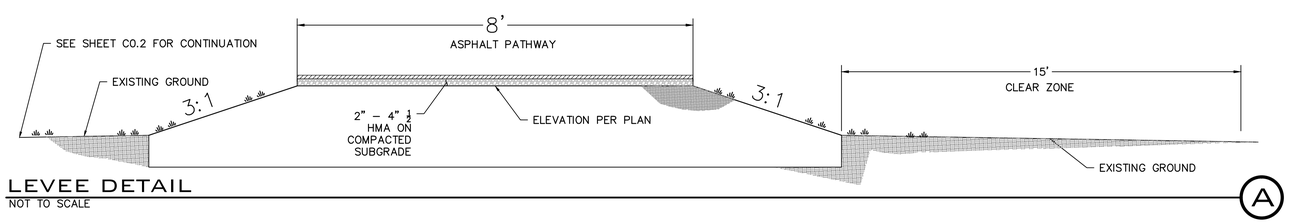

LEVEE DETAIL
NOT TO SCALE (A)

CONSTRUCTION NOTES

1. PROVIDE AND INSTALL 8' WIDE ASPHALT PATHWAY PER CITY OF SPOKANE VALLEY STANDARDS.
2. CONSTRUCT LEVEE PER DETAIL A, THIS SHEET.

LEVEE CONSTRUCTION NOTES:

1. REMOVE EXISTING ORGANICS, TOP SOIL, AND FILL FROM LEVEE FOOTPRINT. SCARIFY AND RECOMPACT A MIMIMUM OF ONE FOOT BELOW LEVEE SUBGRADE.
2. CONSTRUCT LEVEE WITH GRANULAR SOIL WITH 10-30% PASSING SIEVE NO. 200. COMPACTED TO 92% PER ASTM D-1557. SOIL SHOULD BE PLACED IN 6 TO 8-INCH LIFTS. SEE GEOTECHNICAL REPORT TITLED GEOTECHNICAL EVALUATION PROPOSED LEVEE, JOB NO. 14-037A AND DATED JULY, 17 2015.
3. REVEGETATE LEVEE WITH DRYLAND GRASS. SEE SEED MIX, THIS SHEET
4. THERE IS A 15' CLEAR ZONE FROM THE TOE OF THE LEVEE WHERE SHRUBS AND TREES ARE NOT TO BE PLANTED OR EXISTING SHRUBS AND TREES NEED TO BE CLEARED.
5. SEE GEOTECHNICAL REPORT TITLED "GEOTECHNICAL EVALUATION PROPOSED LEVEE 4403 SOUTH DISHMAN-MICA ROAD" BY IPEC DATED JULY 17, 2017.

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 PERRENIAL RYE
20 PERCENT	DURAR HARD FESCUE
45 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 SHALL BE DONE IN ACCORDANCE WITH THE W.S.D.O.T. STANDARD SPECIFICATIONS, SECTION 8-01.

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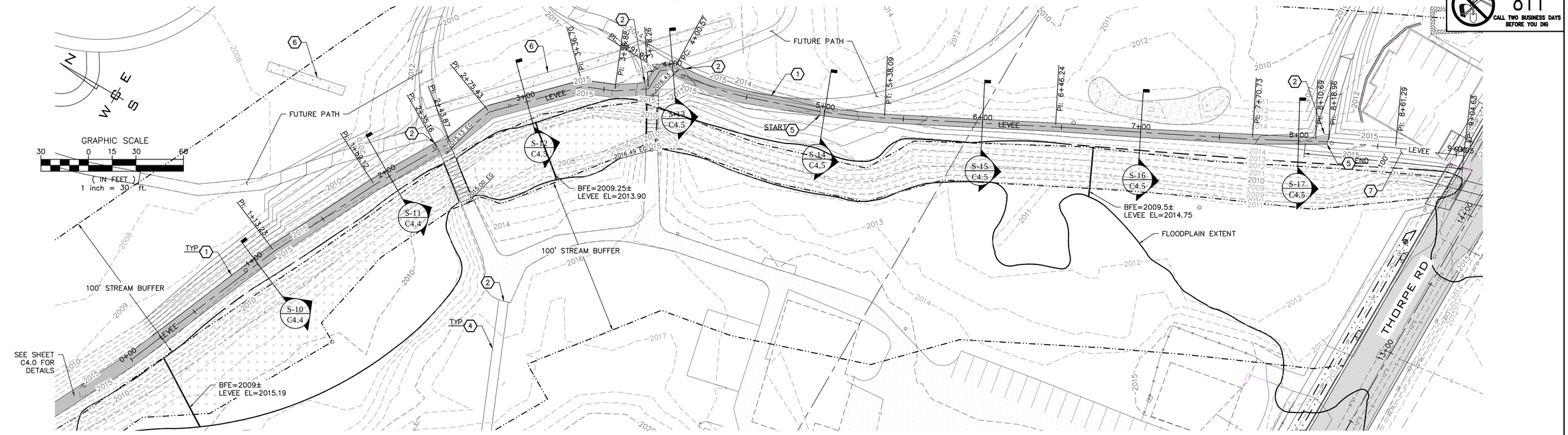
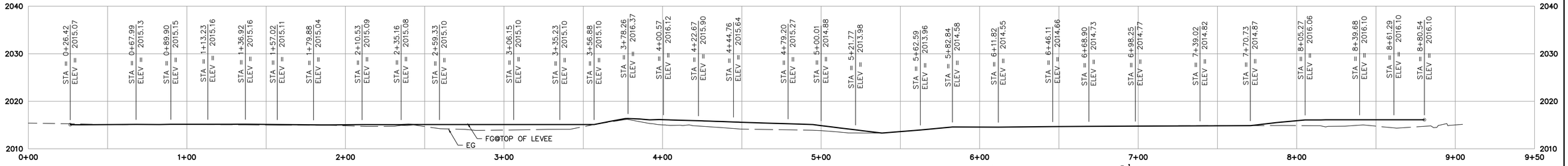
SHEET C4.1
JOB NUMBER 13-1166

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C4.0 LEVEE PLAN.dwg, 10/13/2016 3:07:10 PM

SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, 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 8' WIDE ASPHALT PATHWAY PER CITY OF SPOKANE VALLEY STANDARDS. SEE DETAIL 1, THIS SHEET.
2. CONNECT TO EXISTING SIDEWALK PER CITY OF SPOKANE STANDARDS AND SPECIFICATIONS.
3. CONSTRUCT LEVEE PER DETAIL 1 & 2, THIS SHEET.
4. PROVIDE AND INSTALL 6' CONCRETE SIDEWALK PER CITY OF SPOKANE VALLEY STANDARD PLAN R-103.
5. REMOVE EXISTING ASPHALT AND REPLACE WITH 5.5' WIDE ASPHALT PATH PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE DETAIL 2, THIS SHEET.
6. EXISTING CONCRETE TO BE REMOVED.
7. RAISE EXISTING LEVEE 1' TO 100 FT DOWNSTREAM OF CULVERT.

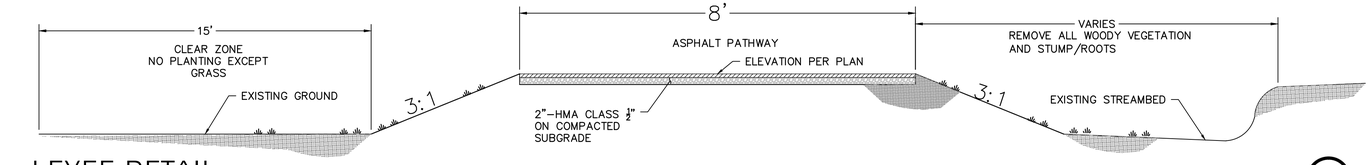
NOTE:
EXISTING LEVEE TO BE UPDATED PER GEOTECHNICAL ENGINEER.

BFE= BASE FLOOD ELEVATION

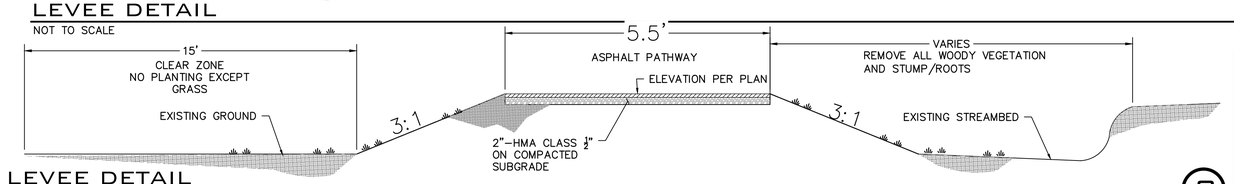
REQUIRED MINIMUM FREEBOARD = 3-FT EXCEPT STA. 1+39 TO STA. 4+82 = 4-FT.

LEVEE CONSTRUCTION NOTES:

1. REMOVE EXISTING PATHWAY AND REPLACE WITH NEW ASPHALT. SEE DETAIL 1 AND 2, THIS SHEET.
2. RAISE LEVEE HEIGHT USING GRANULAR SOIL WITH 10-30% PASSING SIEVE NO. 200. COMPACTED TO 92% PER ASTM D-1557. SOIL SHOULD BE PLACED IN 6 TO 8-INCH LIFTS. SEE GEOTECHNICAL REPORT TITLED LEVEE EVALUATION AND CERTIFICATION, JOB NO. 14-037 AND DATED FEBUARY 12, 2015.
3. REVEGETATE LEVEE WITH DRYLAND GRASS. SEE SEED MIX, SEE SHEET C4.1.
4. THERE IS A 15' CLEAR ZONE FROM THE TOE OF THE LEVEE WHERE WOODY VEGETATION ARE NOT TO BE PLANTED OR EXISTING WOODY MATERIAL NEED TO BE CLEARED.
5. SEE GEOTECHINICAL REPORT TITLED "GEOTECHINICAL EVALUATION-LEVEE EVALUATION AND CERTIFICATION 4403 SOUTH DISHMAN-MICA ROAD" BY IPEC DATED FEBRUARY 12, 2015.



LEVEE DETAIL 1
NOT TO SCALE



LEVEE DETAIL 2
NOT TO SCALE

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"=30'
VERTICAL: 1"=10'

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
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
EXISTING LEVEE PLAN & PROFILE
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C4.2
JOB NUMBER 13-1166

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED
PROFESSIONAL ENGINEER
10/13/16

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GCLDWG\C4.0 LEVEE PLAN.dwg, 10/13/2016 3:07:50 PM

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SW¼, SEC.34, T.25N., R.44E., W.M.
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UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
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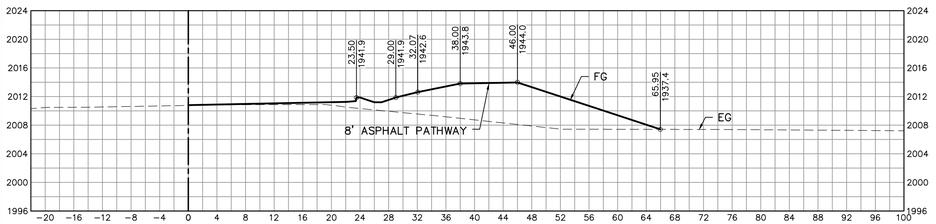
SL-4
29+93.27



SL-3
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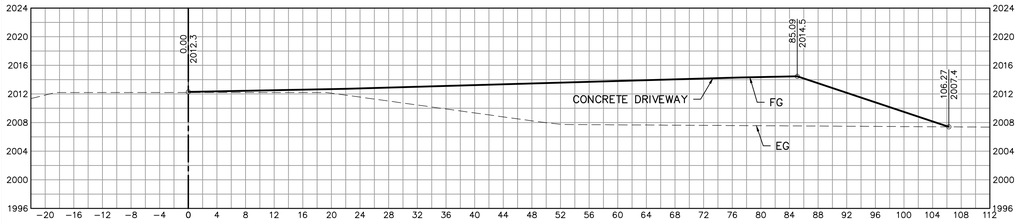

SL-2
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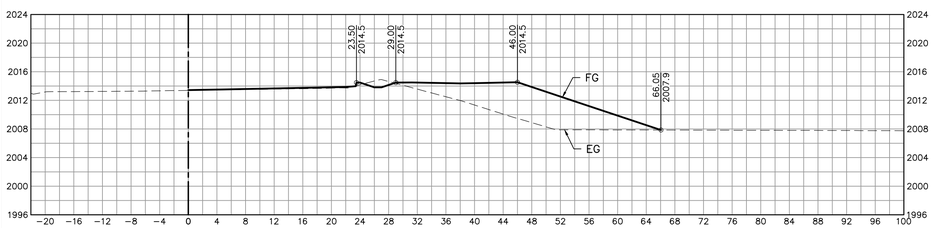

SL-1
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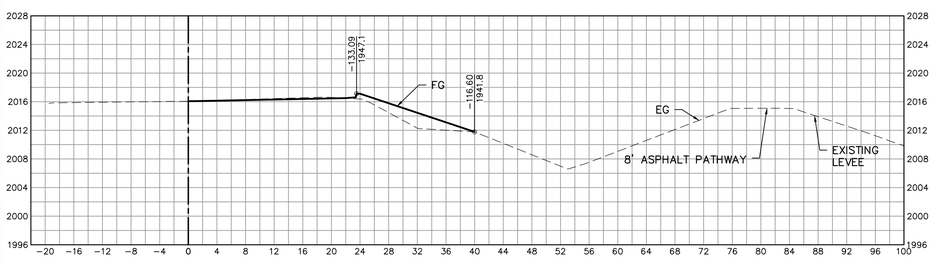
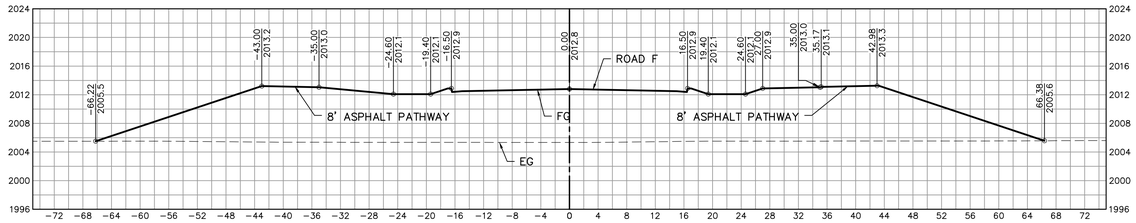


SL-9
11+50.00



SL-8
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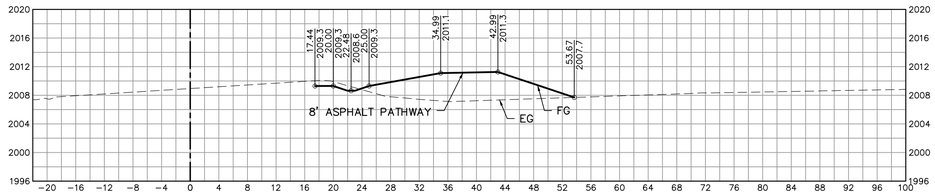

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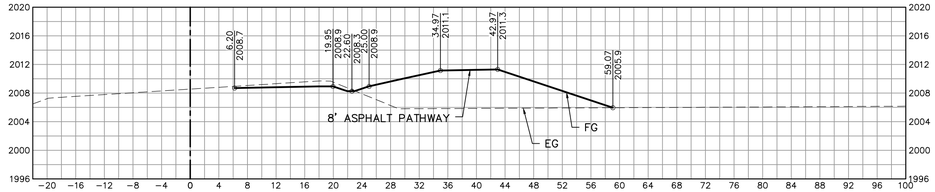

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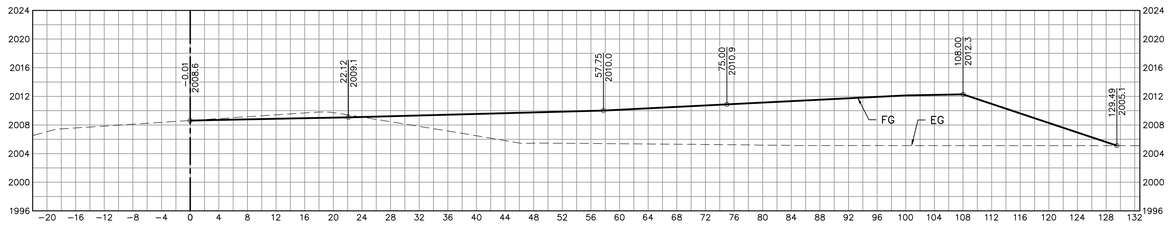

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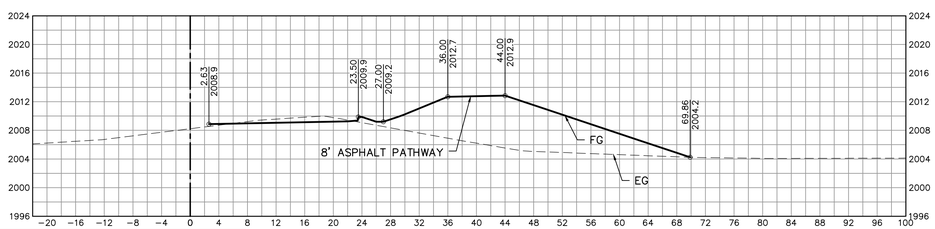

DATUM: NAVD - 88

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

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

City of Spokane Valley
Development Engineering
Reviewer: _____
New Street Miles – Public: _____
☐ Not Reviewed
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Date Accepted _____
Acceptance Comments

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

SHEET
C4.3

JOB NUMBER
13-1166

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SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
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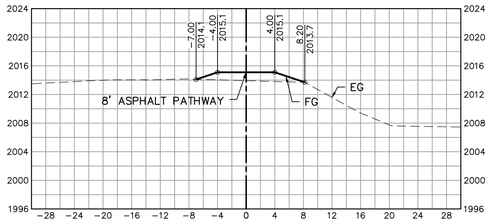
SL-12
3+00.00



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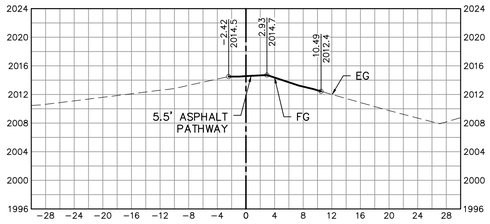

SL-17
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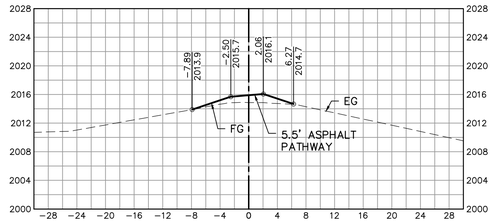

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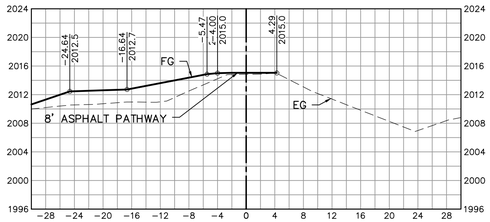

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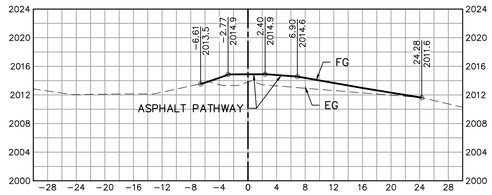

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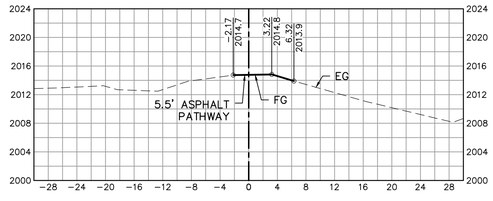

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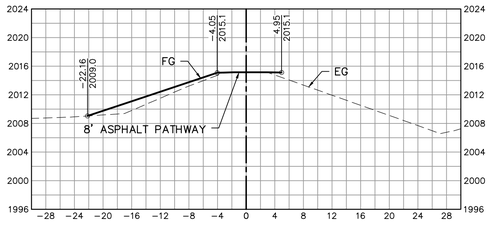

SL-13
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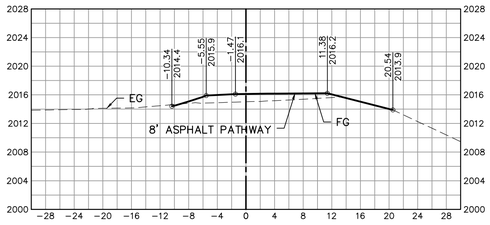

DATUM: NAVD - 88

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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VERTICAL: 1"=10'

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
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2528 NORTH SULLIVAN ROAD
SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

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

SHEET
C4.4

JOB NUMBER
13-1166

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED
PROFESSIONAL ENGINEER
10/13/16

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GCLDWG\C4.0 LEVEE PLAN.dwg, 10/13/2016 3:09:10 PM

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UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
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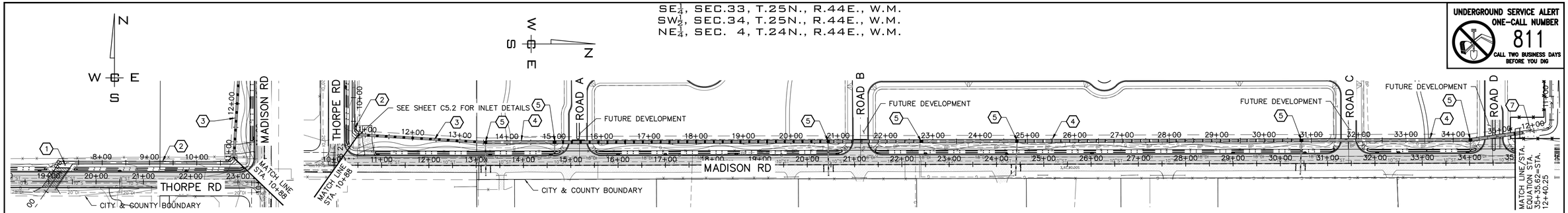
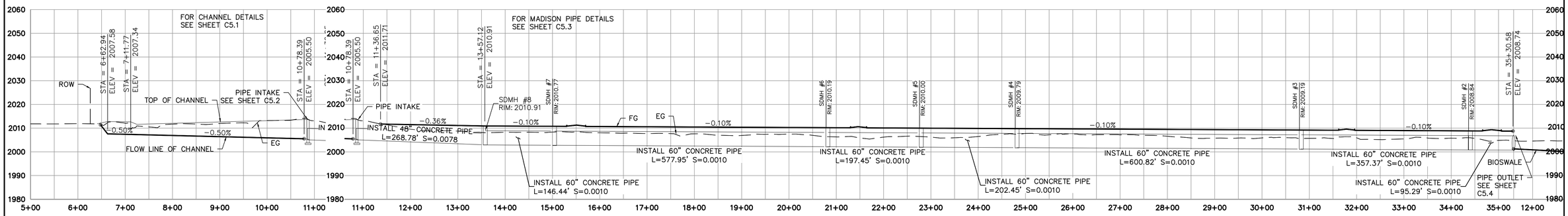
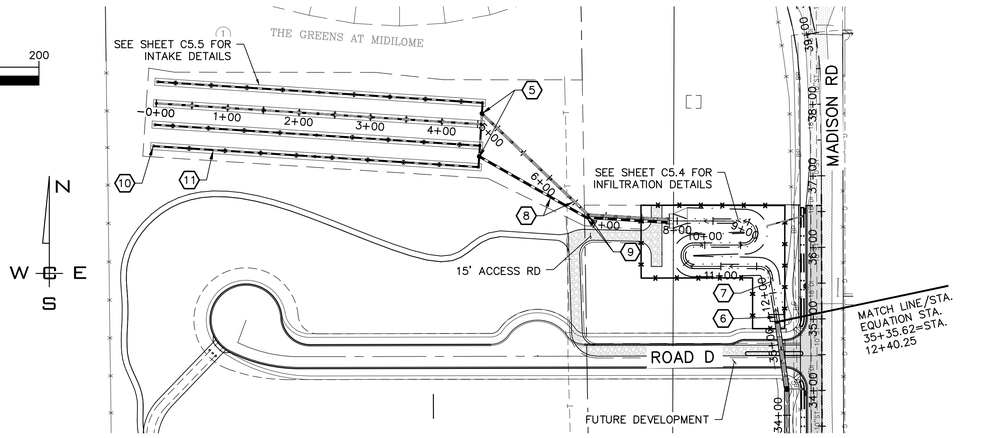
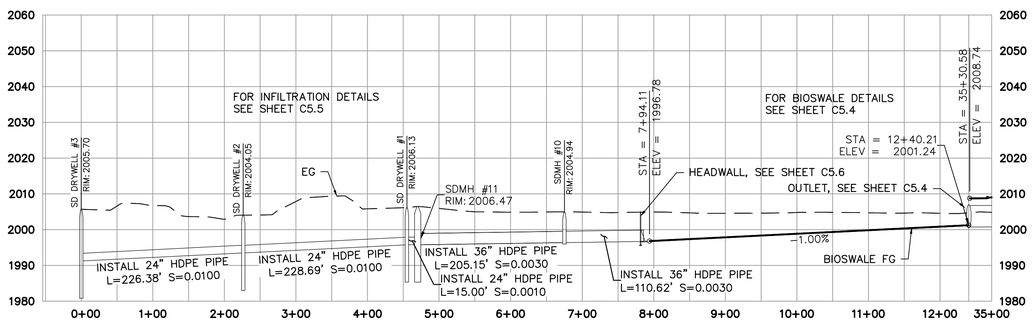




GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 inch = 100 ft.





CONSTRUCTION NOTES

1. PROVIDE AND INSTALL BOX CULVERT, SEE SHEET C5.2 FOR DETAILS.
2. PROVIDE AND INSTALL CONCRETE CHANNEL, SEE SHEET 5.1 FOR DETAILS.
3. PROVIDE AND INSTALL 48" CLASS III RCP PIPE PER WSDOT STANDARD SECTION 9-05.
4. PROVIDE AND INSTALL 60" CLASS III RCP PIPE PER WSDOT STANDARD SECTION 9-05.
5. PROVIDE AND INSTALL TYPE 3-84" SD MANHOLE WITH LID LABEDED "STORM" PER WSDOT STANDARD PLAN B-15.60-01.
6. PROVIDE AND INSTALL CONCRETE OUTLET PAD, SEE SHEET C5.4 FOR DETAILS.
7. PROVIDE AND INSTALL BIOINFILTRATION SWALE, SEE SHEET C5.4 FOR DETAILS.
8. PROVIDE AND INSTALL 36" HDPE PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
9. PROVIDE AND INSTALL 60" SD TYPE III MANHOLE PER SPOKANE COUNTY STANDARD PLAN U-6. LID TO BE LABELED "STORM".
10. PROVIDE AND INSTALL DRYWELL, SEE SHEET C5.5 FOR DETAILS.
11. PROVIDE AND INSTALL 24" HDPE PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.

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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VERTICAL: 1"=20'

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X CIVIL
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OTHER

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

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

SHEET C5.0
JOB NUMBER 13-1166

City of Spokane Valley
Development Engineering
Reviewer: _____
New Street Miles – Public: _____
☐ Not Reviewed
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Date Accepted _____
Acceptance Comments

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C5.0 STORM SYSTEM.dwg, 10/13/2016 3:09:33 PM

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UNDERGROUND SERVICE ALERT
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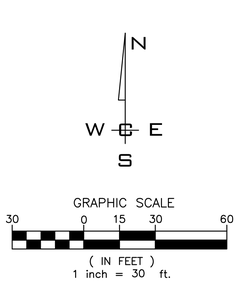
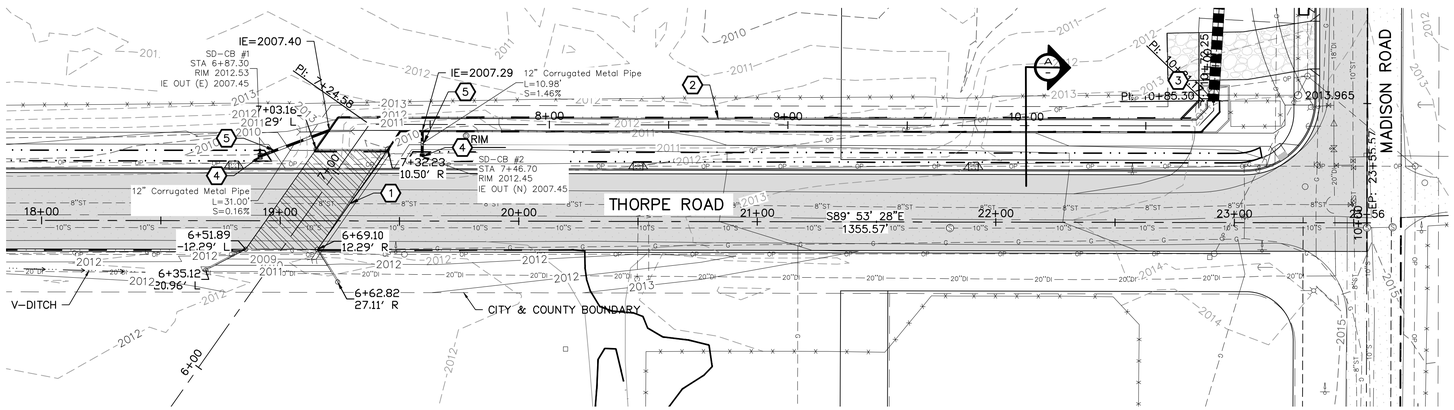
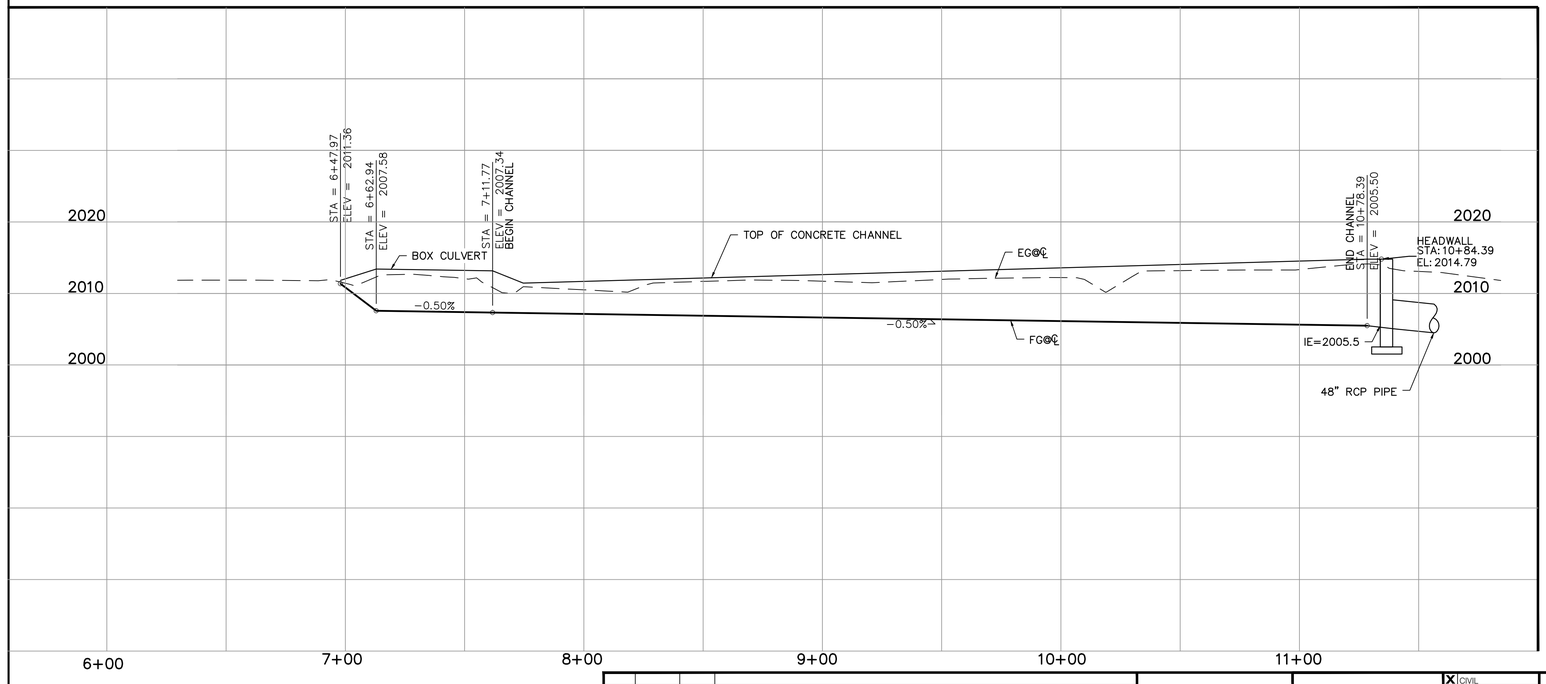
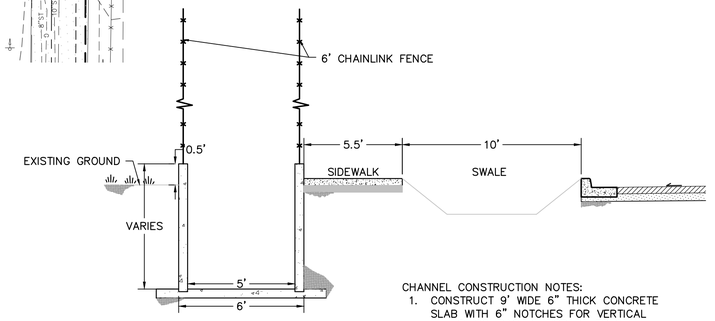




CONSTRUCTION NOTES

1. PROVIDE AND INSTALL BOX CULVERT, SEE SHEET C5.2 FOR DETAILS.
2. PROVIDE AND INSTALL CONCRETE CHANNEL, SEE SHEET 5.2 FOR DETAILS.
3. CONCRETE CHANNEL AND STORM PIPE CONNECTION. SEE DETAIL C, SHEET C5.2.
4. PROVIDE AND INSTALL TYPE I CATCH BASIN FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE PLAN FOR RIM ELEVATION.
5. PROVIDE AND INSTALL 12" CMP PIPE PER CITY SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE PLAN FOR INVERT ELEVATIONS AND LENGTH.





CHANNEL CONSTRUCTION NOTES:
1. CONSTRUCT 9' WIDE 6" THICK CONCRETE SLAB WITH 6" NOTCHES FOR VERTICAL WALLS. COMPACT SUBGRADE TO 95%
2. CONSTRUCT 6" CONCRETE VERTICALS WALLS.

CHANNEL CROSS SECTION

NOT TO SCALE

A

DATUM: NAVD - 88

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

SHEET C5.1

JOB NUMBER 13-1166

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

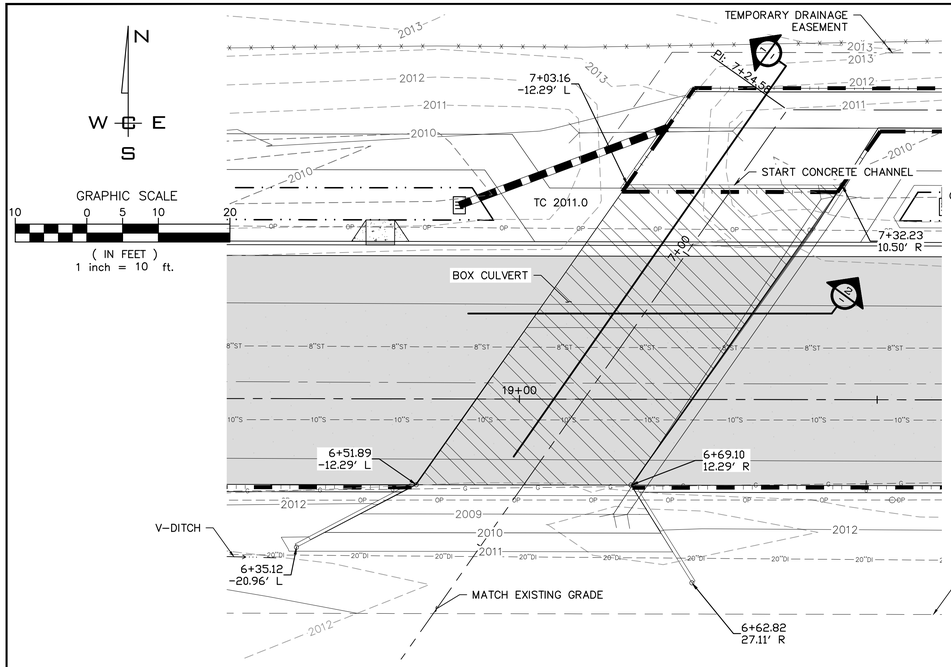
SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

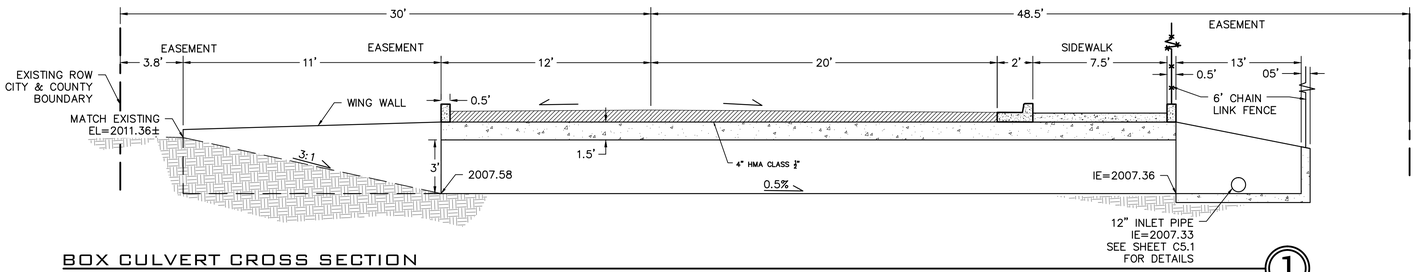
P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C5.1 CONCRETE CHANNEL.dwg, 10/13/2016 3:10:17 PM

SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

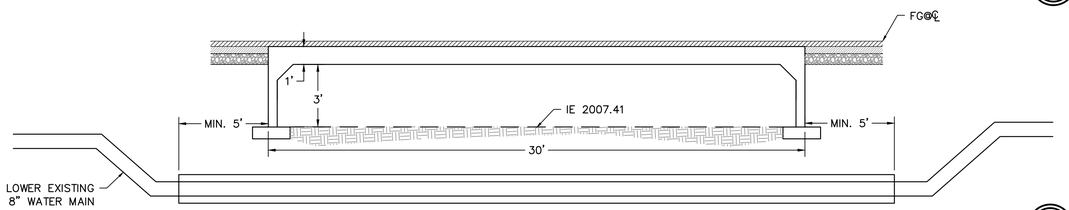
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG



BOX CULVERT DETAIL
SCALE: 1"=10'



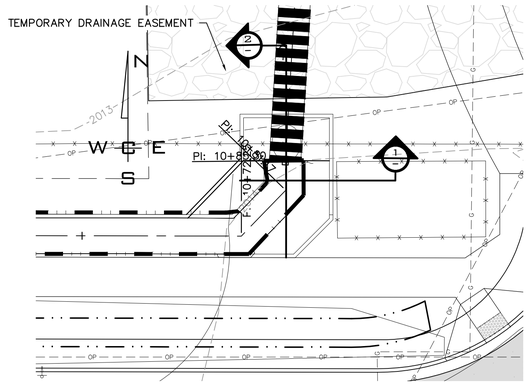
BOX CULVERT CROSS SECTION ①
NOT TO SCALE

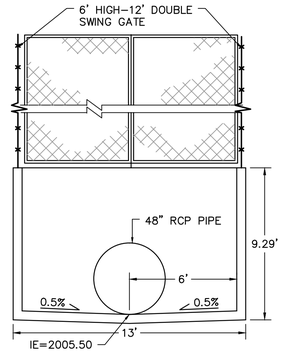


BOX CULVERT CROSS SECTION ②
NOT TO SCALE

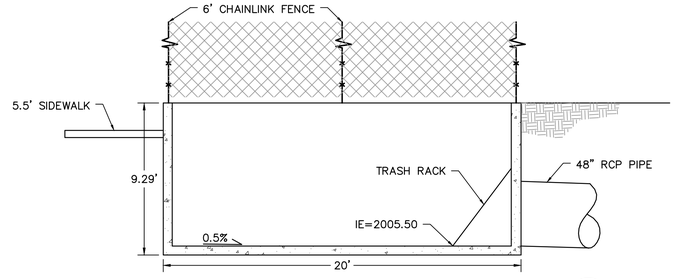
NOTE:
SEE SHEET C5.21 FOR BOX CULVERT DETAILS.

B





CHANNEL & PIPE CROSS SECTION ①
NOT TO SCALE



CHANNEL & PIPE CROSS SECTION ②
NOT TO SCALE

CHANNEL & PIPE CONNECTION
SCALE: 1"=10'

C

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:	N/A
VERTICAL:	N/A
PROJ #:	13-1166
DATE:	08/17/16
DRAWN:	JPP
REVIEWED:	TRW

X	CIVIL
	STRUCTURAL
	SURVEYING
	TRAFFIC
	PLANNING
	LANDSCAPE
	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
BOX CULVERT & CHANNEL DETAILS
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET
C5.2

JOB NUMBER
13-1166

City of Spokane Valley
Development Engineering
Reviewer: _____
New Street Miles – Public: _____
☐ Not Reviewed
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Acceptance Comments

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STATE OF WASHINGTON
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SW¼, SEC.34, T.25N., R.44E., W.M.
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UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
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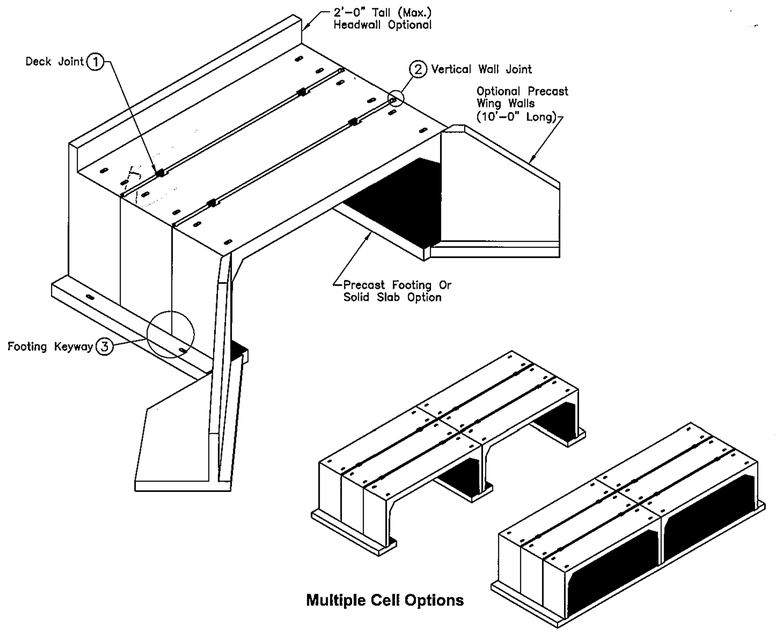
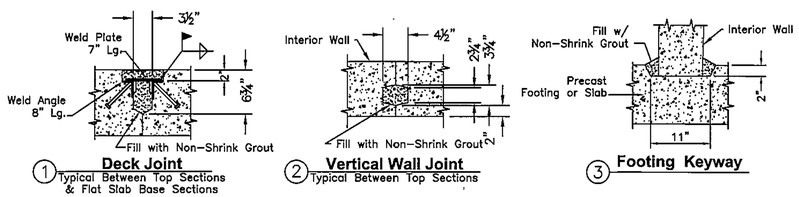


Multiple Cell Options

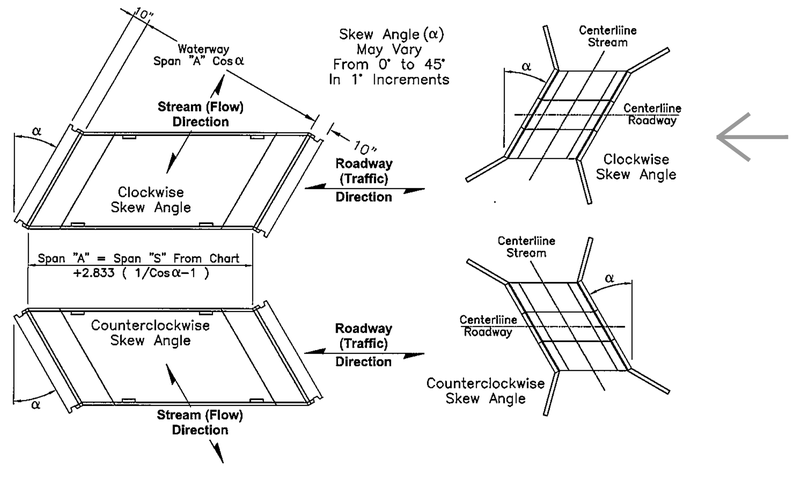


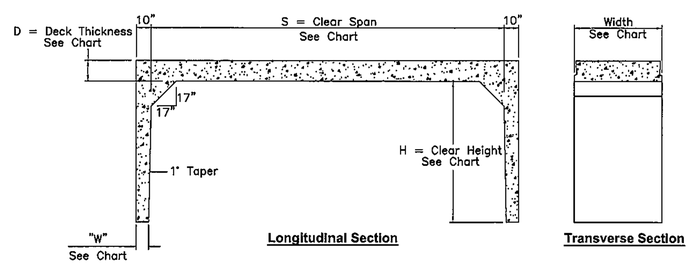
1 Deck Joint Typical Between Top Sections & Flat Slab Base Sections

2 Vertical Wall Joint Typical Between Top Sections

3 Footing Keyway

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





Longitudinal Section **Transverse Section**

Sizing And Weights (KIPs) for Standard Product

		10'–0" Width Product											5'–0" Width Product												
SPAN Ft.	S	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	32.6	33.8	35.0	36.2	37.6	25.1	25.9	26.8	27.7	28.6	29.4	30.3	38.6	39.7	40.8	42.0	43.1	44.2	45.3	46.5
W=9 3/8"	H=4'	27.4	28.6	29.8	31.2	32.4	33.6	34.8	36.2	37.4	38.6	39.8	26.2	27.1	28.0	28.9	29.7	30.6	31.5	39.8	40.9	42.0	43.2	44.3	45.4	46.5	47.7
W=9 1/8"	H=5'	29.8	31.0	32.2	33.4	34.8	36.0	37.2	38.4	39.8	41.0	42.2	27.4	28.3	29.2	30.0	30.9	31.8	32.7	40.9	42.1	43.2	44.3	45.4	46.6	47.7	48.8
W=8 7/8"	H=6'	32.0	33.2	34.4	35.8	37.0	38.2	39.4	40.8	42.0	43.2	44.4	28.5	29.4	30.3	31.2	32.0	32.9	33.8	42.1	43.2	44.3	45.4	46.6	47.7	48.8	49.9
W=8 5/8"	H=7'	34.2	35.4	36.6	38.0	39.2	40.4	41.6	43.0	44.2	45.4	46.6	29.6	30.5	31.4	32.3	33.1	34.0	34.9	43.2	44.3	45.4	46.6	47.7	48.8	49.9	51.1
W=8 1/2"	H=8'	36.4	37.6	38.8	40.0	41.4	42.6	43.8	45.0	46.4	47.6	48.8	30.7	31.6	32.5	33.3	34.2	35.1	36.0	44.2	45.4	46.5	47.6	48.7	49.9	51.0	52.1
W=8 1/4"	H=9'	38.6	39.8	41.0	42.2	43.4	44.6	46.0	47.2	48.4	49.6	51.0	31.8	32.6	33.5	34.4	35.3	36.1	37.0	45.3	46.4	47.5	48.7	49.8	50.9	52.0	53.2
W=8"	H=10'	40.6	41.8	43.0	44.2	45.4	46.6	48.0	49.2	50.4	51.6	52.0	32.8	33.6	34.5	35.4	36.3	37.1	38.0	46.3	47.4	48.6	49.7	50.8	51.9	53.1	54.2

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

City of Spokane Valley
Development Engineering
Reviewer: _____
New Street Miles – Public: _____
☐ Not Reviewed
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Date Accepted _____
Acceptance Comments

SEPTEMBER 2016
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TODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

DATUM: NAVD - 88
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NO.	DATE	BY	REVISIONS
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SCALE:
HORIZONTAL: N/A
VERTICAL: N/A

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
OTHER

WCE
WHIPPLE CONSULTING ENGINEERS
2529 NORTH SULLIVAN ROAD
SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

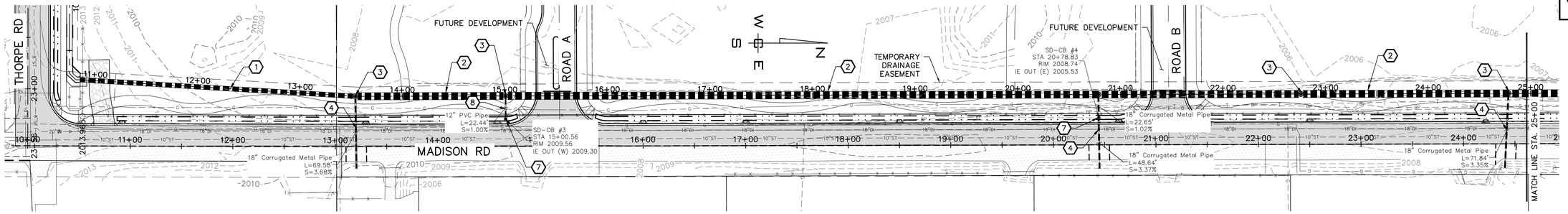
SPOKANE VALLEY PAINTED HILLS PRD
BOX CULVERT DETAILS
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

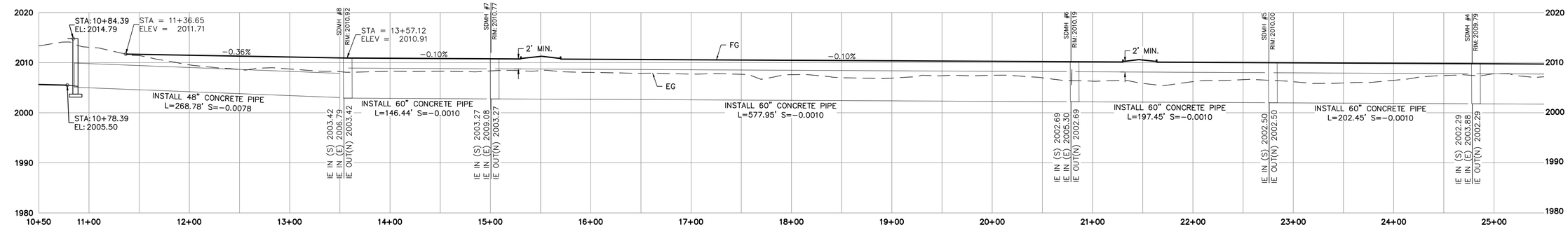
SHEET C5.21
JOB NUMBER 13-1166

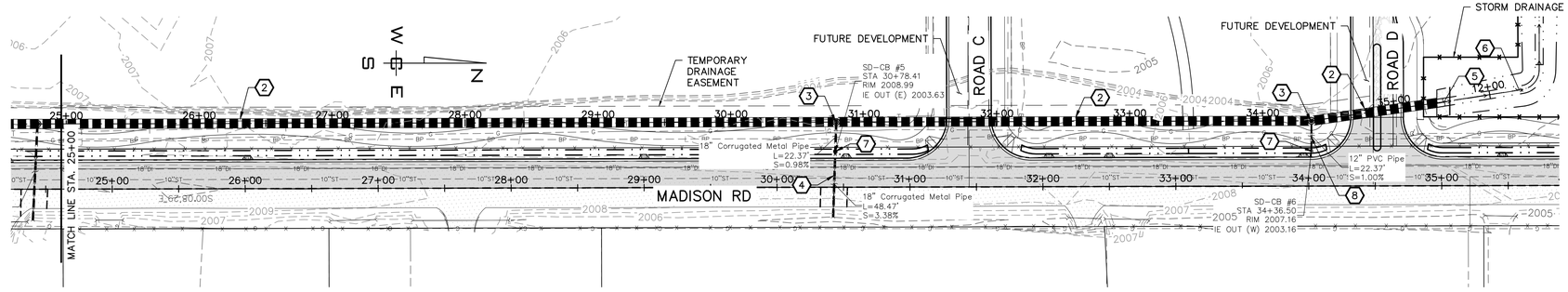
P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C5.1 CONCRETE CHANNEL.dwg, 10/13/2016 3:11:03 PM

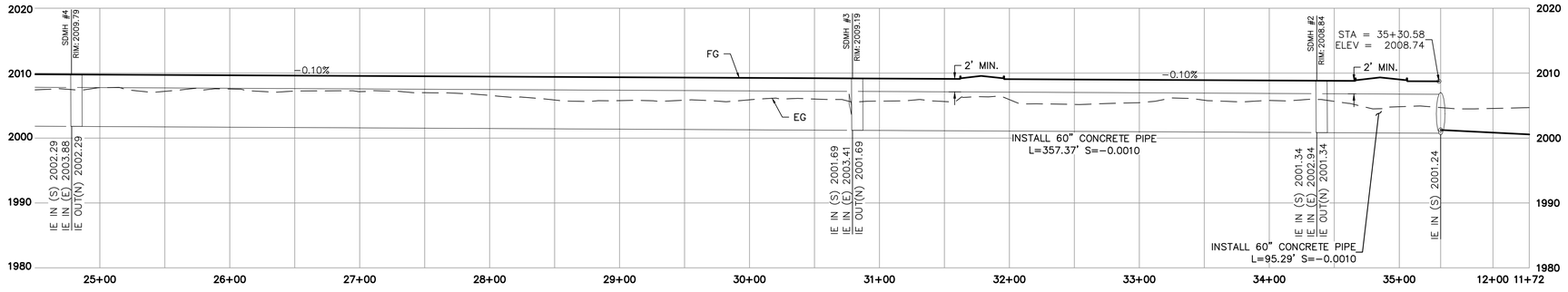
SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

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









GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

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.

CONSTRUCTION NOTES

1. PROVIDE AND INSTALL CLASS III 48" RCP PIPE PER WSDOT STANDARD SECTION 9-05.
2. PROVIDE AND INSTALL CLASS III 60" RCP PIPE PER WSDOT STANDARD SECTION 9-05.
3. PROVIDE AND INSTALL TYPE 3-84" SD MANHOLE WITH FLAT LID LABELED "STORM" PER WSDOT STANDARD PLAN B-15.60-01.
4. PROVIDE AND INSTALL 18" CMP CULVERT WITH RUBBER GASKET, SEE SHEET C3.24 FOR DETAILS.
5. PROVIDE AND INSTALL CONCRETE OUTLET PAD, SEE SHEET C5.4 FOR DETAILS.
6. PROVIDE AND INSTALL BIOINFILTRATION SWALE, SEE SHEET C5.4 FOR DETAILS.
7. PROVIDE AND INSTALL TYPE 1 CATCH BASIN WITH FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S-112. SEE PLANS FOR DETAILS.
8. PROVIDE AND INSTALL 12" PVC PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE PLANS FOR DETAILS.

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

JODD R. WHIPPLE STATE OF WASHINGTON 25462 REGISTERED PROFESSIONAL ENGINEER
10/13/16

NO.	DATE	BY	REVISIONS
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SCALE:
HORIZONTAL: 1"=50'
VERTICAL: 1"=10'

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
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
MADISON STORM PIPE P&P
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C5.3

JOB NUMBER 13-1166

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C5.3 MADISON STORM PIPE.dwg, 10/13/2016 3:11:17 PM

SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
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UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
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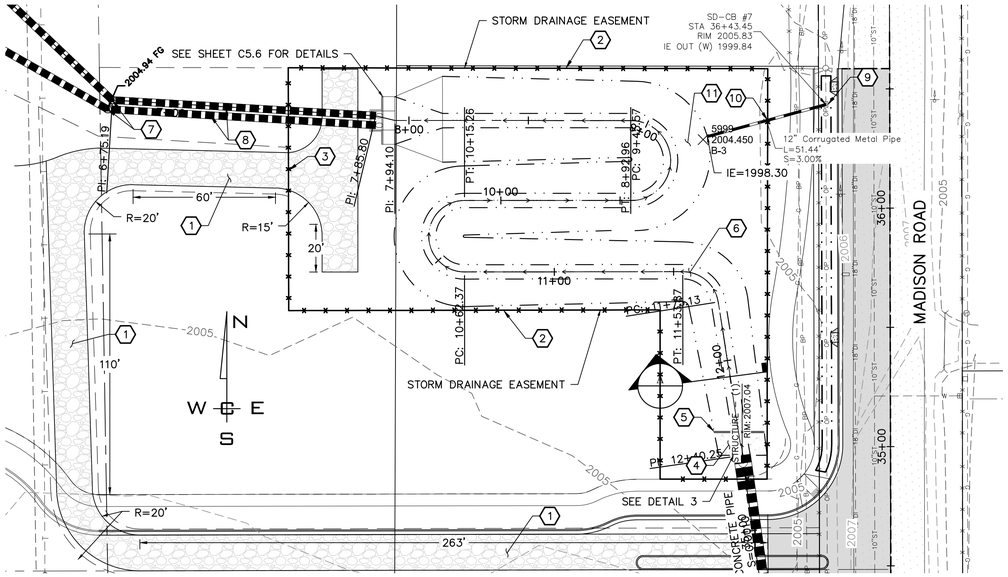
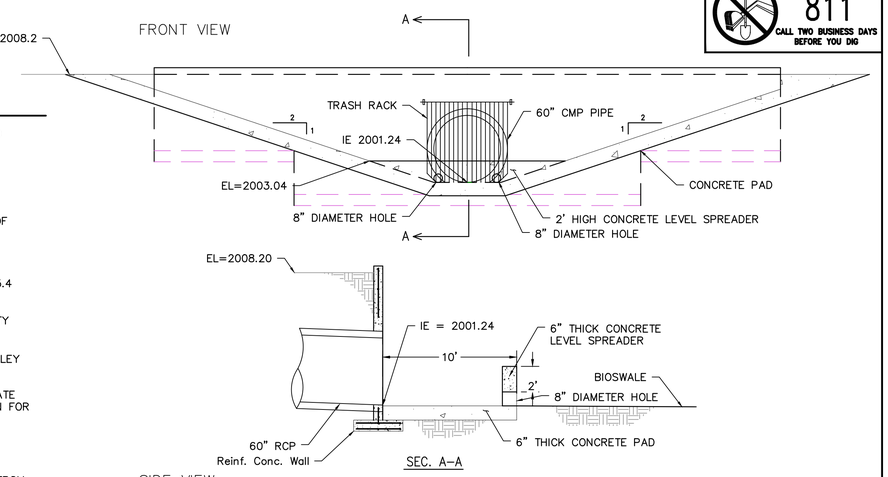


CONSTRUCTION NOTES

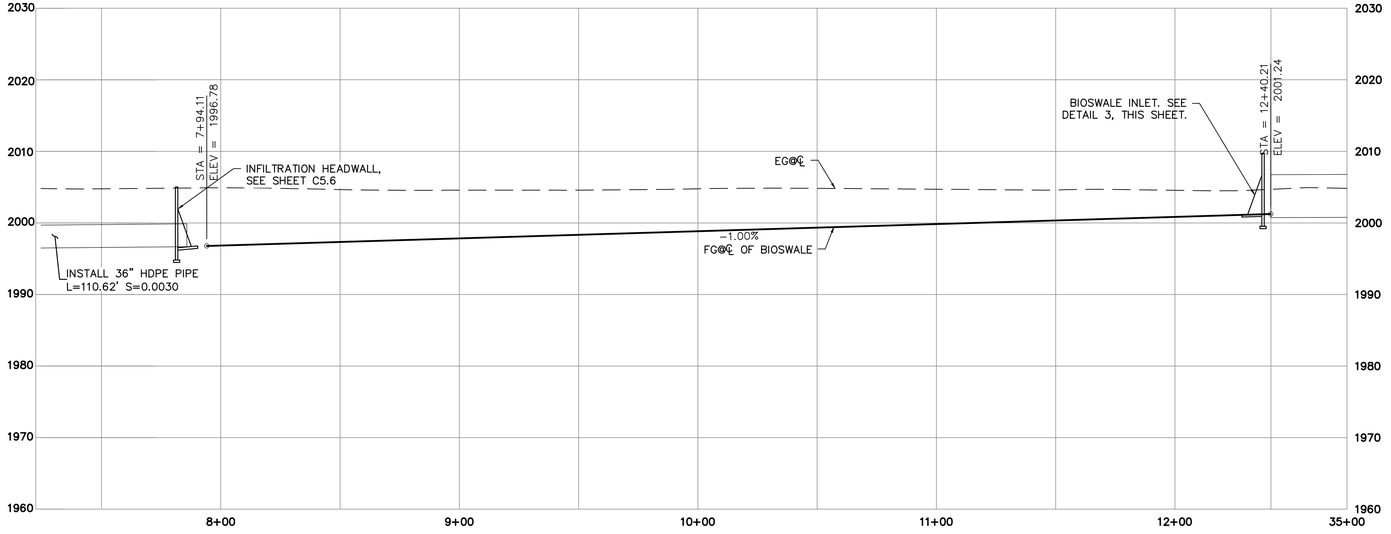
1. CONSTRUCT 15' WIDE ACCESS RD – 6" CSTC ON 95% COMPACTED SUBGRADE.
2. PROVIDE AND INSTALL 6' CHAINLINK FENCE.
3. PROVIDE AND INSTALL 12' WIDE DOUBLE SWING GATE.
4. PROVIDE AND INSTALL 10' CONCRETE SLAB ACROSS FULL WIDTH OF BIOSWALE. SEE DETAIL 3, THIS SHEET.
5. PROVIDE & INSTALL 2' LIP, SEE DETAIL 3, THIS SHEET.
6. PROVIDE AND INSTALL 6' BIOSWALE, SEE SECTION A ON SHEET C5.4 FOR DETAILS.
7. PROVIDE AND INSTALL 1–60" SDMH PER CITY OF SPOKANE COUNTY STANDARD PLAN U–6 WITH LID LABELED "STORM".
8. PROVIDE AND INSTALL 36" HDPE PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
9. PROVIDE AND INSTALL TYPE I CATCH BASIN WITH FRAME AND GRATE PER CITY OF SPOKANE VALLEY STANDARD PLAN S–112. SEE PLAN FOR DETAILS.
10. PROVIDE AND INSTALL 12" CMP PIPE PER CITY SPOKANE VALLEY STANDARDS AND SPECIFICATIONS. SEE SHEET PLAN FOR DETAILS.
11. PROVIDE AND INSTALL 6" DIAMETER RIP–RAP ARMOR 1 FT DEEP FROM PIPE INVERT TO BOTTOM OF SWALE 2 FT WIDE.

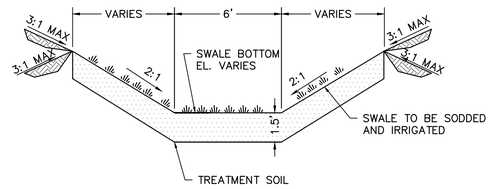


BIOSWALE INLET CROSS SECTION

NOT TO SCALE

3





TREATMENT SOIL NOTE:
18" OF TREATMENT SOIL WITH AN INFILTRATIVE RATE BETWEEN 0.25 AND 0.5 INCHES/HOUR AND AVERAGE CATION EXCHANGE CAPACITY OF AT LEAST 15 MILLIQUIVELENTS/100 GRAMS OR AT LEAST 2% OF ORGANIC MATTER BY WEIGHT. SEE TABLE 6–1, PG. 6–16 OF THE SPOKANE REGIONAL STORMWATER MANUAL

WARNING – THE USE OF SILTY LOAM IS PROHIBITED AS POND BOTTOM MATERIAL.

TYPICAL BIOSWALE SECTION

NOT TO SCALE

A

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

DATUM: NAVD - 88
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SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

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

SHEET C5.4
JOB NUMBER 13-1166

City of Spokane Valley
Development Engineering
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New Street Miles – Public: _____
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THE GREENS AT MEDILOME

SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
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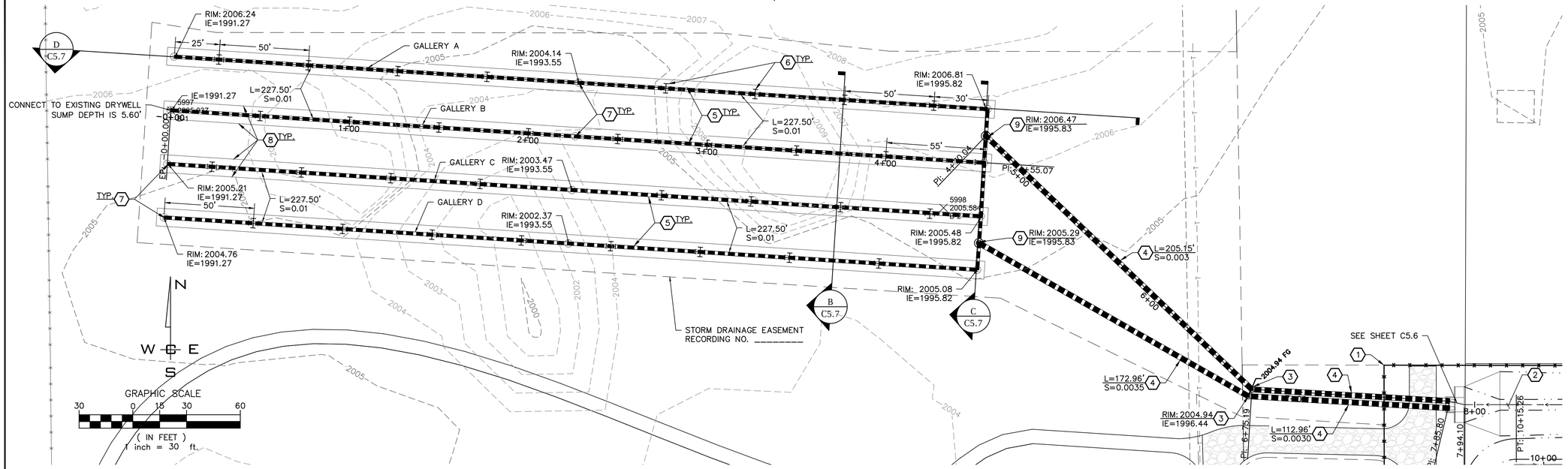

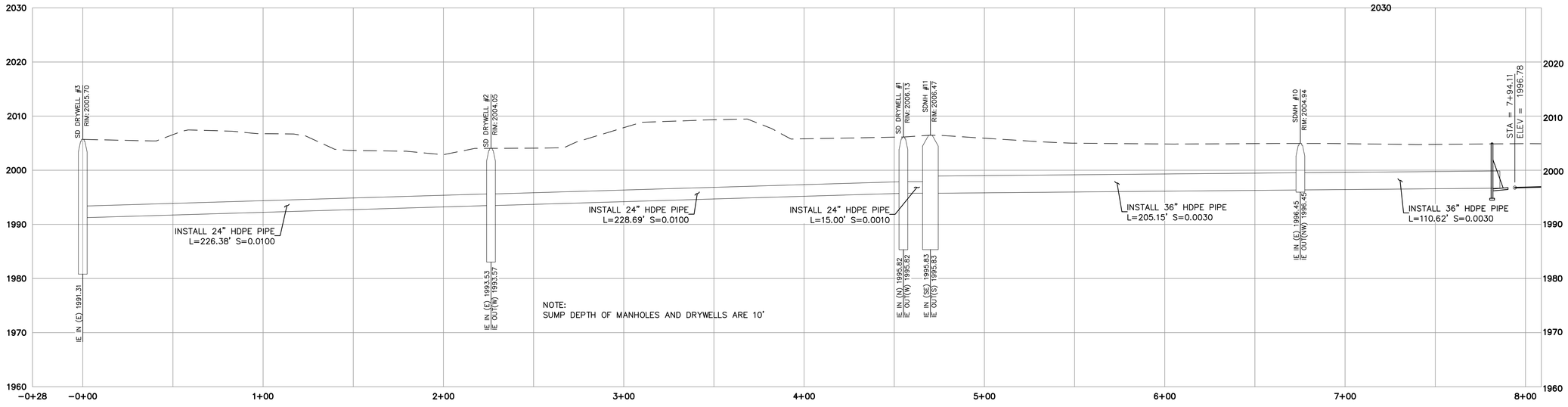

CONSTRUCTION NOTES

1. PROVIDE AND INSTALL 6' CHAINLINK FENCE.
2. PROVIDE AND INSTALL 6' BIOSWALE, SEE DETAIL 3 ON SHEET C5.4 FOR DETAILS.
3. PROVIDE AND INSTALL 60" SDMH PER CITY OF SPOKANE COUNTY STANDARD PLAN U-6 WITH LID LABELED "STORM".
4. PROVIDE AND INSTALL 36" HDPE PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
5. PROVIDE AND INSTALL 24" HDPE PIPE PER CITY OF SPOKANE VALLEY STANDARDS AND SPECIFICATIONS.
6. PROVIDE AND INSTALL 24" HDPE CROSS, WITH 2' STUB ON BOTH SIDE COVERED WITH NONWOVEN FILTER FABRIC AND BANDED, SEE DETAIL 3 ON SHEET C5.7 FOR DETAILS. SEE PLAN VIEW FOR SPACING.
7. PROVIDE AND INSTALL DRYWELL WITH SOLID LID PER CITY OF SPOKANE VALLEY STANDARD S-101. RIM ELEVATION PER PLAN. LID TO BE MARKED "STORM".
8. PROVIDE AND INSTALL NONWOVEN GEOTEXTILE FABRIC, MODERATE SURVIBABILITY PER WSDOT STD SPEC 9-33.2(1). OVERLAP FABRIC A MINIMUM OF 1'-6". SEE DETAIL B SHEET C5.7 FOR PLACEMENT.
9. PROVIDE AND INSTALL 84" SD MANHOLE PER SPOKANE COUNTY STANDARDS AND SPECIFICATIONS. LID LABELED "STORM".

DATUM: NAVD - 88

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

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

- X CIVIL
- STRUCTURAL
- SURVEYING
- TRAFFIC
- PLANNING
- LANDSCAPE
- 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
INFILTRATION PLAN & PROFILE
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C5.5

JOB NUMBER 13-1166

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

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED
PROFESSIONAL ENGINEER
10/13/16

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

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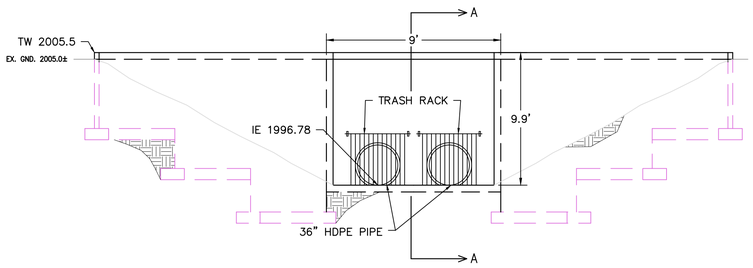
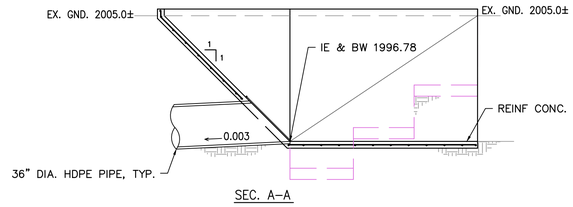
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

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



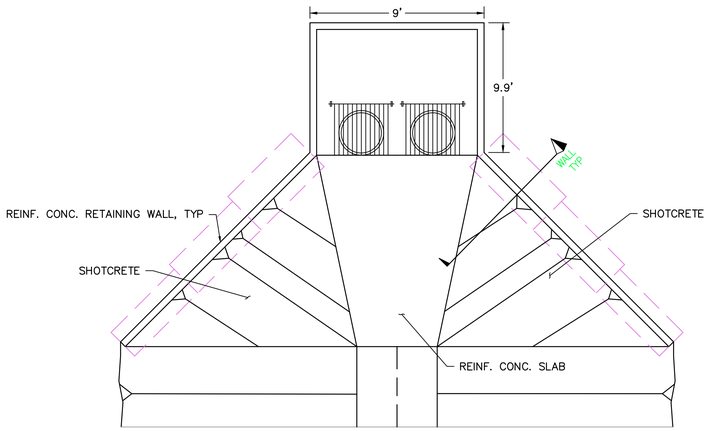


SEC. A-A

HEAD WALL - FRONT VIEW CROSS SECTION

NOT TO SCALE

1



HEAD WALL -TOP VIEW CROSS SECTION

NOT TO SCALE

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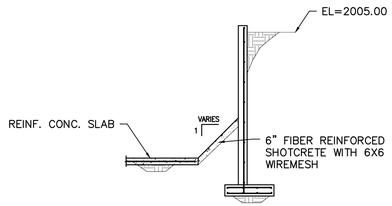

WALL TYPICAL

NOT TO SCALE

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: N/A
VERTICAL: N/A

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: JPP
REVIEWED: TRW

- [X] CIVIL
- [ ] STRUCTURAL
- [ ] SURVEYING
- [ ] TRAFFIC
- [ ] PLANNING
- [ ] LANDSCAPE
- [ ] 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
INFILTRATION HEADWALL DETAILS
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C5.6

JOB NUMBER 13-1166

City of Spokane Valley
Development Engineering

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New Street Miles – Public: _____

- [ ] Not Reviewed
- [ ] Reviewed for Conformance to Street Standards and Accepted per Chapter 1.2

Date Accepted _____
Acceptance Comments

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

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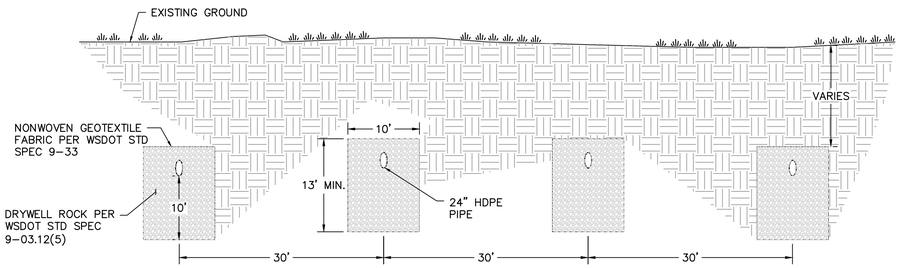

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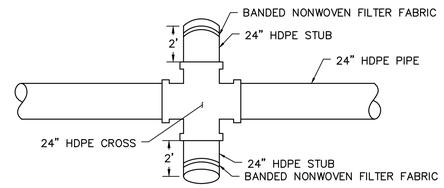

24" HDPE CROSS DETAIL (3)
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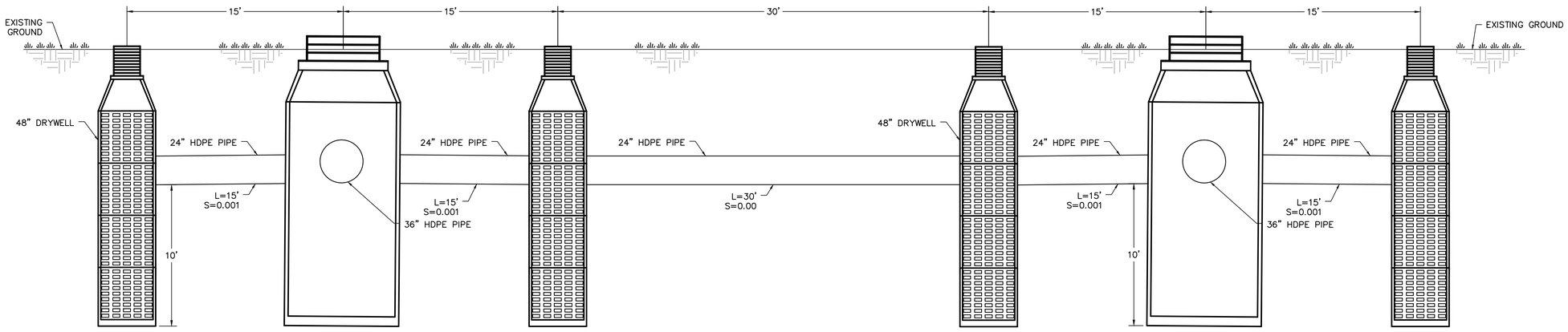

DRAIN FIELD CROSS SECTION (C)
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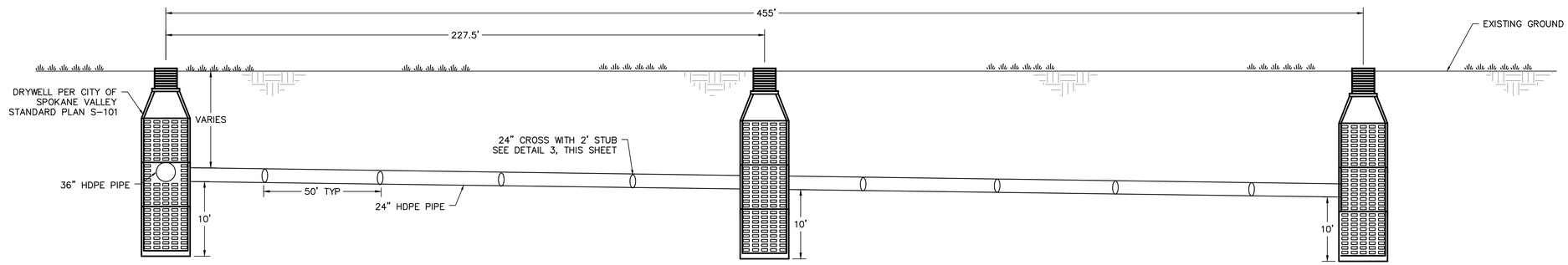

DRAIN FIELD CROSS SECTION (D)
NOT TO SCALE

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C5.7

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Development Engineering
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SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

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.

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
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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.

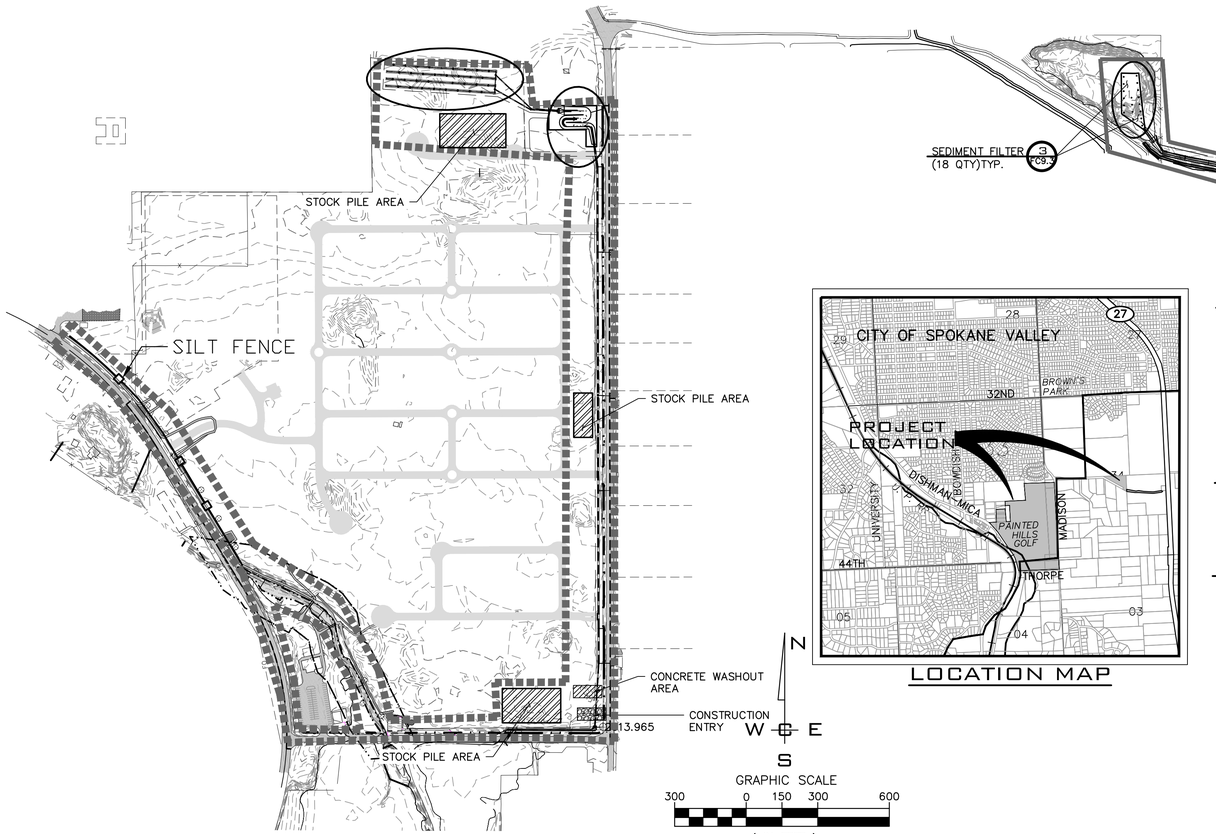
18. BASED ON REQUIREMENTS FROM CITY OF SPOKANE VALLEY, THE ENGINEER OR HIS DESIGNEE SHALL PERFORM MATERIALS TESTING AND QUALITY CONTROL ON THE PROJECT AND SHALL SUBMIT COPIES OF DAILY REPORTS, TEST REPORTS, PROJECT CERTIFICATION AND RECORD DRAWINGS TO THE CITY OF SPOKANE VALLEY ENGINEER.

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 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.

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.



SITE PLAN
SCALE: 1" = 300'

LOCATION MAP

INDEX TO PLAN SHEETS

LEGEND

- STORM DRAINAGE POND – 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

PERMIT SPECIALIST
CITY OF SPOKANE VALLEY
PERMIT CENTER
11707 E SPRAGUE AVE
SPOKANE, WA 99206
PHONE: 720-5240

DEV. CONST. INSP.
CITY OF SPOKANE VALLEY
11707 E SPRAGUE AVE
SPOKANE, WA 99206
PHONE: 720-5324
CONTACT: JOHN JOHNSON

SOLID WASTE
WASTE MANAGEMENT
PHONE: 1-866-909-4458

SEWER
SPOKANE COUNTY UTILITIES
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

INSPECTION
I.P.E.C.
P. O. BOX 1566
VERADALE, WA 99037
PHONE: 209-6262
CONTACT: PAUL T. NELSON, P.E.

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

SURVEYOR
WHIPPLE CONSULTING ENGINEERS
2528 N SULLIVAN RD
SPOKANE VALLEY, WA 99216
PHONE: 893-2617
CONTACT: JON GORDON, P.L.S.

FIRE
SPOKANE VALLEY FIRE DEPT.
2120 N WILBUR RD
SPOKANE VALLEY, WA 99206
PHONE: 928-1700
CONTACT: TRACI HARVEY

TELEPHONE
CENTURY LINK
904 N COLUMBUS ST
SPOKANE, WA 99202
PHONE: 623-0305
CONTACT: DEBORAH GEIST

ENGINEERING
WHIPPLE CONSULTING ENGINEERS
2528 N SULLIVAN RD
SPOKANE VALLEY, WA 99216
PHONE: 893-2617
CONTACT: TODD WHIPPLE, P.E.

POWER
INLAND POWER & LIGHT
OPERATIONS DEPARTMENT
P.O. BOX A
SPOKANE, WASHINGTON 99219
PHONE: 789-4291
CONTACT: CONNIE NELSON

CABLE
COMCAST BROADBAND
1717 E BUCKEYE AVE
SPOKANE, WA 99207
PHONE: 755-4717
CONTACT: BRYAN RICHARDSON

OWNER
BRYAN WALKER
C/O NAI BLACK
107 S HOWARD ST
SPOKANE, WA 99201
PHONE: 623-1000
CONTACT: BRYAN WALKER

DATUM: NAVD - 88
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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 **THE CITY OF SPOKANE VALLEY,** OR UNTIL VEGETATION IS ESTABLISHED THROUGHOUT THE SITE, AND ACCEPTED BY **THE CITY OF SPOKANE VALLEY,** 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. AS WORK PROGRESSES, ADDITIONAL SILT FENCE MAY BE REQUIRED TO PROTECT STREAM AREAS AND PREVENT SEDIMENT FROM GOING OFFSITE.
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: **NAI BLACK – BRYAN WALKER**
   PERMIT APPLICANT: **WHIPPLE CONSULTING ENGINEERS, INC. 509-893-2617**
   CONTACT PERSON ON SITE: **TBD**
9. PROJECT LOCATION: **DISHMAN-MICA ROAD & THORPE ROAD, IN SPOKANE COUNTY, WASHINGTON, IN SECTION 33, TOWNSHIP 25 N., RANGE 44 E. W.M.**
10. PROJECT DESCRIPTION: **DEVELOPMENT OF 99.7 ACRES +/- INTO COTTAGE, SINGLE FAMILY, ESTATE, APARTMENT, AND COMMERCIAL LOTS OF AN EXISTING VACANT GOLF COURSE.**
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: **SEPTEMBER – 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.** BMPs, 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 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.
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 PROTECTIONS DEVICES SHALL BE CLEANED OR REMOVED AND REPLACE BEFORE SIX INCHES OF SEDIMENT CAN ACCUMULATE.
22. REMOVE TEMPORARY **E.SC.** BMP'S WITHIN 30 DAYS AFTER THE TEMPORARY BMP'S ARE NO LONGER NEEDED. PERMANENTLY STABILIZE AREA THAT ARE DISTURBED DURING REMOVAL PROCESS.
23. 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
1	08-12-16	JPP	ORIGINAL PREPARATION

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

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: RMA
REVIEWED: TRW

X CIVIL
STRUCTURAL
SURVEYING
TRAFFIC
PLANNING
LANDSCAPE
OTHER

WCE
WHIPPLE CONSULTING ENGINEERS
2529 NORTH SULLIVAN ROAD
SPOKANE VALLEY, WA 99216
PH: 509-893-2617 FAX: 509-926-0227

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

SHEET C9.1
JOB NUMBER 13-1166

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE
STATE OF WASHINGTON
25462
REGISTERED PROFESSIONAL ENGINEER
10/13/16

P:\WCE_WORK\2013 WCE PROJECTS\2013-1166 Walker - Painted Hills GC\DWG\C9.0 EROSION CONTROL.dwg, 10/13/2016 3:14:28 PM

SE¼, SEC.33, T.25N., R.44E., W.M.
SW½, SEC.34, T.25N., R.44E., W.M.
NE¼, SEC. 4, T.24N., R.44E., W.M.

UNDERGROUND SERVICE ALERT
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CALL TWO BUSINESS DAYS BEFORE YOU DIG

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 THAT 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 THAT 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.

POLYMETRIC 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)	0.02/SEC MIN.
GRAB TENSILE STRENGTH (ASTM D4632)	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 SUE. 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 HALL 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 POLYMETRIC 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 PF 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 SILF 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 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 OR 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 ON POLYMERIC MESH SHALL BE EQUIVALENT TO OR GREATER THAT 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 THEN 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

MAINTENANCE STANDARDS:

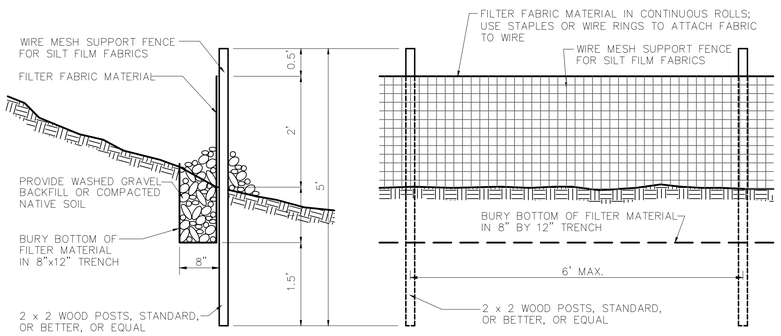
ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.

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 ULTRAVIOLENT BREAKDOWN, IT SHALL BE REPLACED.



SILT FENCE DETAIL

NOT TO SCALE

1 / -

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.

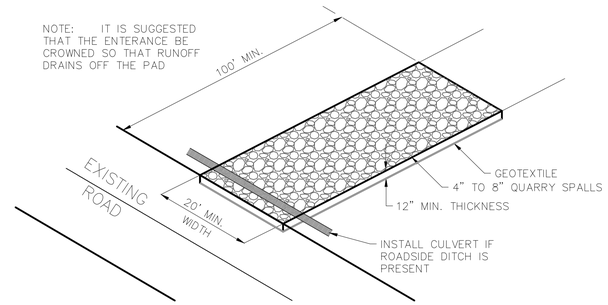
IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH.

ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED BY SHOVELING OR STREET SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED RO 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 LOOSENED 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 ENTERANCE(S), FENCING (SEE BMPS C103 AND C104) SHALL BE INSTALLED TO CONTROL TRAFFIC.

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



ROCK CONSTRUCTION ENTRY

NOT TO SCALE

2 / -

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

SEPTEMBER 2016
PLANS NOT APPROVED BY AGENCY

TODD R. WHIPPLE — STATE OF WASHINGTON — 25462 — REGISTERED PROFESSIONAL ENGINEER
10/13/16

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: N/A
VERTICAL: N/A

PROJ #: 13-1166
DATE: 08/17/16
DRAWN: RMA
REVIEWED: TRW

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OTHER

WCE
WHIPPLE CONSULTING ENGINEERS
2928 NORTH SULLIVAN ROAD
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SPOKANE VALLEY PAINTED HILLS PRD
SWPPP BMPs
DISHMAN-MICA RD.
SPOKANE VALLEY,WA

SHEET C9.2

JOB NUMBER 13-1166

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SE¼, SEC.33, T.25N., R.44E., W.M.
SW¼, SEC.34, T.25N., R.44E., W.M.
NE¼, 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 THAT 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 AND 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 MESS 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 IN 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 CAB 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 WOODED 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

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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 ANDLING 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 (BMPC126) 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 THAT WATER ALONE. THE 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.

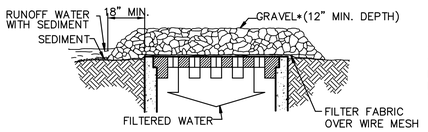
TECHNIQUES THAT CAN BE USED FOR UNPAVED ROADS AND LOTS INCLUDE:

- 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) 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-CAUSEING WORK ON WINDY DAYS.

MAINTENANCE STANDARDS:

REPAY 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.

* GRAVEL SHALL BE 2"–3" CLEAN STONE



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.

GRAVEL AND WIRE MESH INLET SEDIMENT FILTER

NOT TO SCALE

3
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UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
811
CALL TWO BUSINESS DAYS BEFORE YOU DIG

City of Spokane Valley
Development Engineering

Reviewer: _____
New Street Miles – Public: _____

☐ Not Reviewed
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