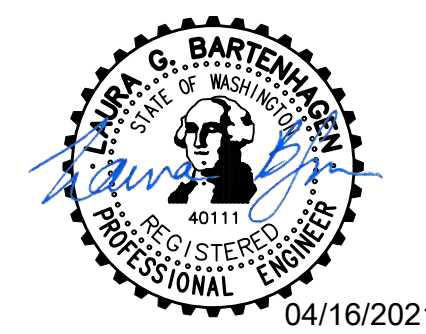




SUNCADIA
RESORT • COMMUNITY • LEGACY

ROADWAY AND UTILITY CONSTRUCTION PLANS
FOR
NELSON RIDGE (PHASE 2 DIVISION 6)

APRIL 16, 2021



33400 8th Ave S, Suite 205
Federal Way, WA 98003
Phone: (253) 838-6113
ESM JOB NO.: 998-812-020

APPROVED FOR CONSTRUCTION

_____	_____
KITTITAS COUNTY ENGINEER	DATE

PROJECT DIRECTORY

DEVELOPER

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770 SUNCADIA TRAIL
CLE ELUM, WA 98922
PHONE (509) 649-3000
FAX (509) 649-3059

CIVIL ENGINEER / SURVEYOR

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KEITH COMBS

GEOTECHNICAL ENGINEER

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CARNATION, WA 98014
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FAX (425) 996-4036
BRIAN BEAMAN, PE, LEG, LHG

AGENCIES

KITTITAS COUNTY DEPARTMENT
OF PUBLIC WORKS
411 N. RUBY
ELLENSBURG, WA 98926

SURVEY DATA

HORIZONTAL DATUM

THE HORIZONTAL DATUM FOR ALL PROJECT MAPPING IS NORTH AMERICAN DATUM OF 1983/1991 (NAD 83/91) (WASHINGTON SOUTH ZONE). THE MAPPING WAS MOVED FROM STATE PLANE COORDINATES TO PROJECT DATUM BASED ON A COMBINED SCALE FACTOR OF 0.999870387.

VERTICAL DATUM

THE VERTICAL DATUM FOR ALL PROJECT MAPPING IS NGVD 1929, AS PROVIDED BY AMERICAN ENGINEERING CORPORATION.

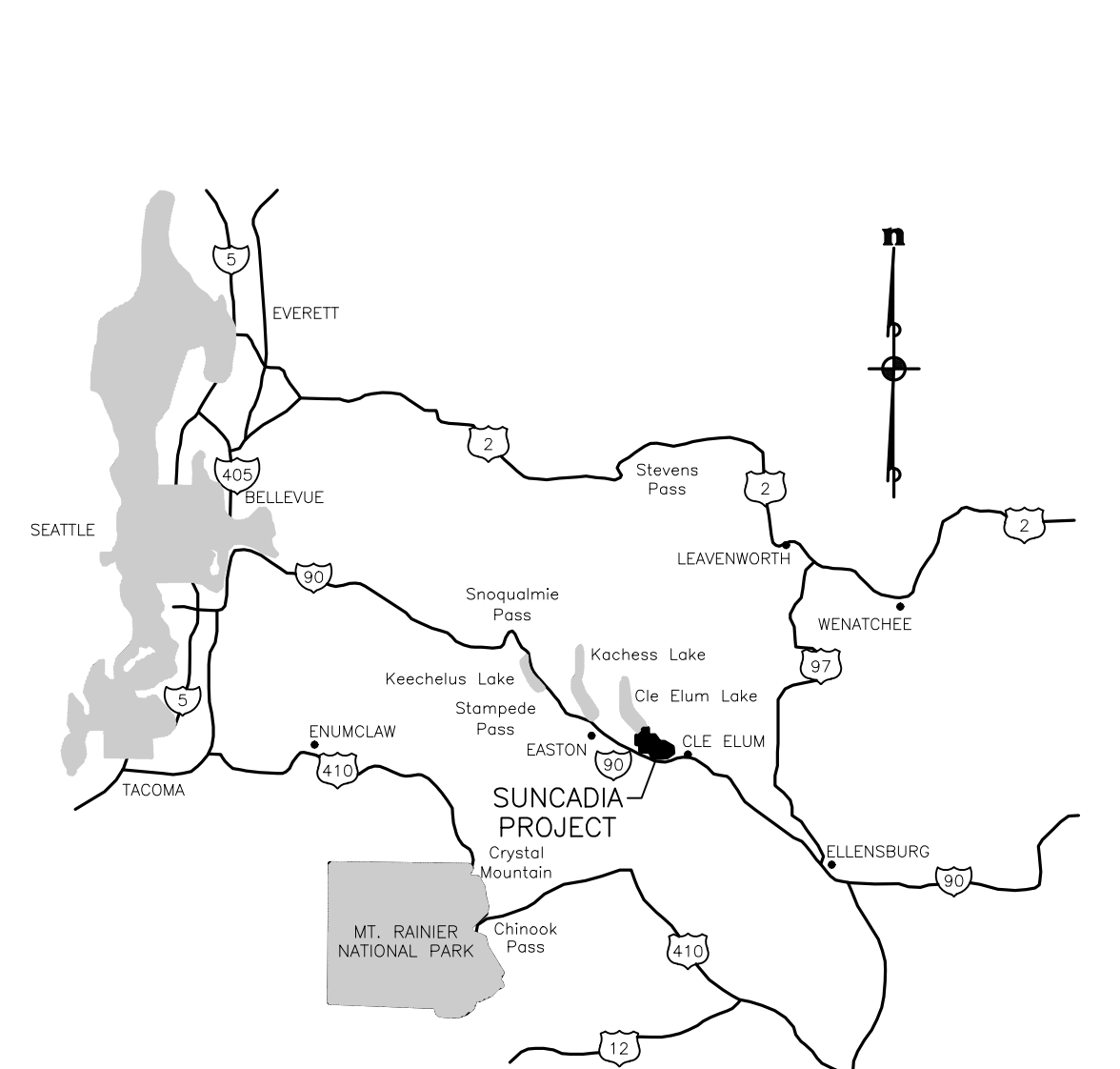
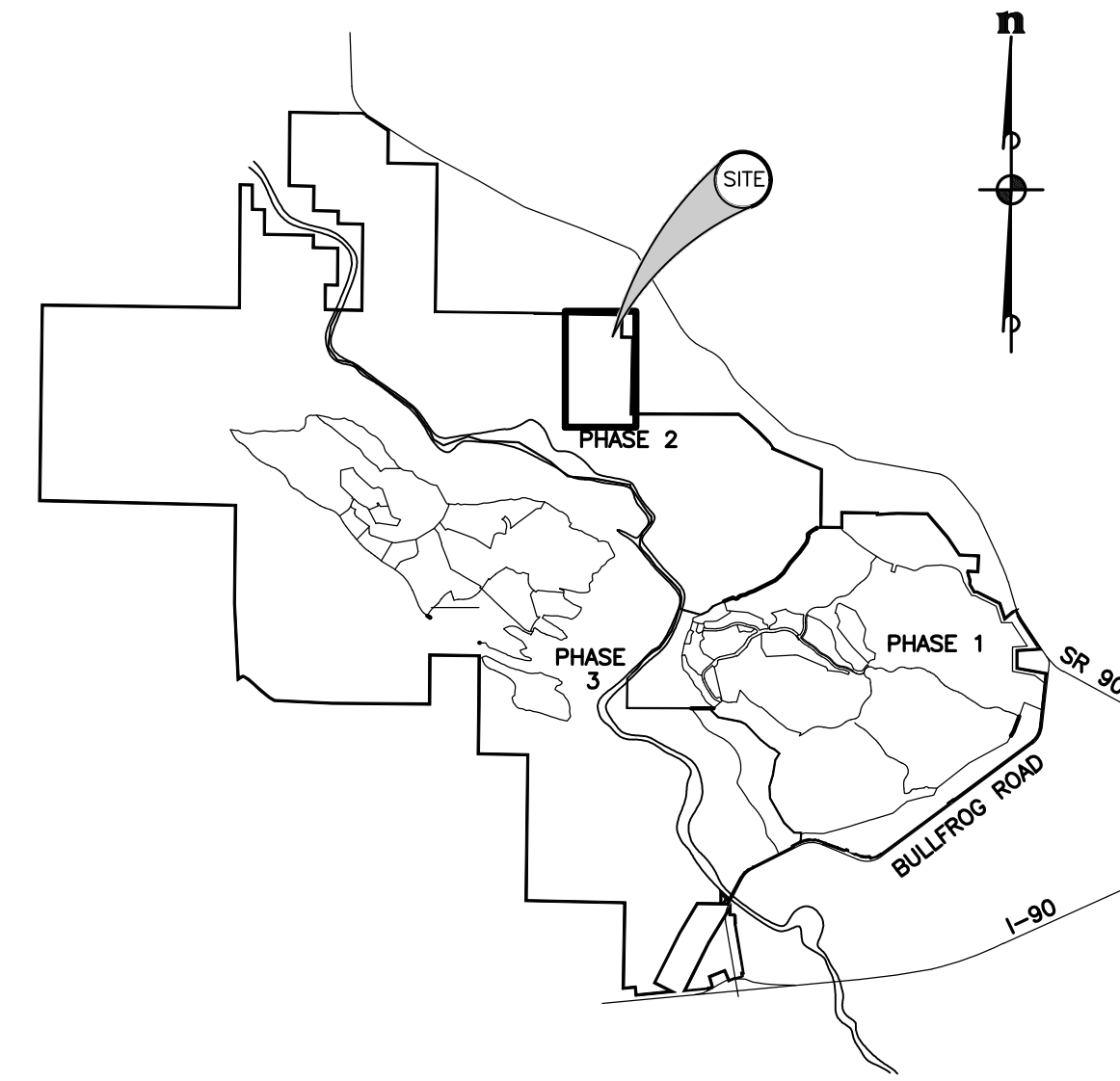
PROJECT BENCHMARK

BENCH MARK DISK L 525 1982, LOGO MARK - NGS
NGVD 29 ELEVATION 2026.05
LOCATION; SET IN TOP NORTH END OF WEST CURB
OF THE INTERSTATE 90 HIGHWAY OVERPASS ALONG
STATE HIGHWAY 903.

EARTHWORK QUANTITIES

12" STRIPPING ASSUMED 5,400 CY
CUT 2,200 CY
FILL 4,200 CY
NET FILL 2,000 CY

NOTE: EARTHWORK QUANTITIES ARE "NEAT LINE" ONLY AND DO NOT ACCOUNT FOR SHRINK OR SWELL FACTORS. FURTHERMORE, EXISTING TOPOGRAPHY IS A COMBINATION OF FIELD AND AERIAL INFORMATION. AERIAL TOPOGRAPHY MAY VARY FROM FIELD CONDITIONS. CONTRACTOR SHALL CALCULATE EARTHWORK VOLUMES FOR BID PURPOSES AND VERIFY EXISTING GRADES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.



LOCATION MAP
NOT TO SCALE

VICINITY MAP
NOT TO SCALE

LEGEND

	EXISTING	PROPOSED
ROADWAY CENTERLINE	---	---
PROPERTY / LOT LINE	---	---
RIGHT-OF-WAY	---	---
BOUNDARY LINE	---	---
EASEMENT LINE	---	---
AERIAL CONTOUR	-220	-220
CONTOUR	-812	-812
WETLAND WITH BUFFER	[Symbol]	[Symbol]
STREAM WITH BUFFER	[Symbol]	[Symbol]
TOP OF SLOPE	---	---
CATCH BASIN TYPE 1/1L W/GRATE	[Symbol]	[Symbol]
CATCH BASIN TYPE 1 W/SOLID LID	[Symbol]	[Symbol]
CATCH BASIN TYPE 2 W/GRATE	[Symbol]	[Symbol]
CATCH BASIN TYPE 2 W/SOLID LID	[Symbol]	[Symbol]
ROOF LEVEL SPREADER	[Symbol]	[Symbol]
STORM DRAIN PIPE	[Symbol]	[Symbol]
SANITARY SEWER MANHOLE	[Symbol]	[Symbol]
SANITARY SEWER CLEANOUT	[Symbol]	[Symbol]
SANITARY SEWER CAP	[Symbol]	[Symbol]
SANITARY SEWER PIPE	[Symbol]	[Symbol]
SANITARY SEWER FORCE MAIN	[Symbol]	[Symbol]
6" DIA SINGLE SANITARY SIDE SEWER	[Symbol]	[Symbol]
FIRE HYDRANT (3 PORT)	[Symbol]	[Symbol]
GATE VALVE	[Symbol]	[Symbol]
BUTTERFLY VALVE	[Symbol]	[Symbol]
CONCRETE BLOCKING	[Symbol]	[Symbol]
WATER CAP	[Symbol]	[Symbol]
DOMESTIC / IRRIGATION METER	[Symbol]	[Symbol]
BLOWOFF ASSEMBLY	[Symbol]	[Symbol]
AIR-VAC ASSEMBLY	[Symbol]	[Symbol]
CROSS	[Symbol]	[Symbol]
TEE	[Symbol]	[Symbol]
90° BEND	[Symbol]	[Symbol]
WATER PIPE	[Symbol]	[Symbol]
GUARD POST (BOLLARD)	[Symbol]	[Symbol]

	EXISTING	PROPOSED
ANCHOR	[Symbol]	[Symbol]
POWER POLE	[Symbol]	[Symbol]
STREET LIGHT	[Symbol]	[Symbol]
POWER VAULT	[Symbol]	[Symbol]
TELE. VAULT	[Symbol]	[Symbol]
FENCE	[Symbol]	[Symbol]
SIGN	[Symbol]	[Symbol]
MAILBOX	[Symbol]	[Symbol]
BARRICADE	[Symbol]	[Symbol]
TELE. MANHOLE	[Symbol]	[Symbol]
GAS VALVE	[Symbol]	[Symbol]
GAS METER	[Symbol]	[Symbol]
JOINT UTILITY TRENCH	[Symbol]	[Symbol]

SURVEY

[Symbol]	SET HUB AND TACK	[Symbol]	ALDER
[Symbol]	FOUND HUB AND TACK	[Symbol]	CEDAR
[Symbol]	SET REBAR AND CAP	[Symbol]	COTTONWOOD
[Symbol]	FOUND REBAR AND CAP	[Symbol]	POPLAR
[Symbol]	SET PK-DRILL HOLE	[Symbol]	APPLE
[Symbol]	FOUND PK-DRILL HOLE	[Symbol]	FIR
[Symbol]	CALC CLOSING CORNER	[Symbol]	WILLOW
[Symbol]	FOUND CLOSING CORNER	[Symbol]	SPRUCE
[Symbol]	FOUND MEANDER CORNER	[Symbol]	MADRONA
[Symbol]	CALC MEANDER CORNER	[Symbol]	OAK
[Symbol]	PROPOSED MONUMENT IN CASE	[Symbol]	HEMLOCK
[Symbol]	FOUND MONUMENT IN CASE	[Symbol]	MAPLE
[Symbol]	PROPOSED MONUMENT IN CASE	[Symbol]	PINE
[Symbol]	FOUND SURFACE MONUMENT	[Symbol]	
[Symbol]	PROPOSED SURFACE MONUMENT	[Symbol]	
[Symbol]	CALC SECTION CORNER	[Symbol]	L ARC LENGTH
[Symbol]	FOUND SECTION CORNER	[Symbol]	Δ DELTA
[Symbol]	FOUND QUARTER CORNER	[Symbol]	(R) RADIAL BEARING < >
[Symbol]	CALC QUARTER CORNER	[Symbol]	(NR) NON-RADIAL BEARING
[Symbol]	CENTER SECTION	[Symbol]	S.S.E. SANITARY SEWER EASEMENT
[Symbol]	TAX LOT	[Symbol]	P.S.D.E. PRIVATE STORM DRAINAGE EASEMENT
[Symbol]	FOUND WITNESS CORNER	[Symbol]	FF ELEVATION OF MINIMUM BASEMENT FINISH FLOOR
[Symbol]	CALC WITNESS CORNER	[Symbol]	S.D.E. STORM DRAINAGE EASEMENT

SHEET INDEX

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WS-KEY	14	WATER/SEWER KEY MAP
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DT-05 - DT-08	23-26	WATER/SEWER DETAILS & NOTES
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ER-02	28	CLEARING & T.E.S.C. DETAILS & NOTES
UT-01	29	COMPOSITE UTILITY PLAN

SOIL CONDITION AND GRADING NOTES

- FILL SHALL BE BENCHED ONTO SLOPES THAT EXCEED 4H:1V.
- IF CHANGED CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PROMPTLY OF (1) EXISTING SUBSURFACE CONDITIONS DIFFERING FROM THOSE INDICATED IN THE PLANS, OR (2) EXISTING UNKNOWN SUBSURFACE CONDITIONS, OF AN UNUSUAL NATURE, DIFFERING MATERIALLY FROM THOSE ORDINARILY ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE NO CLAIMS TO THE OWNER/ENGINEER FOR EXTRA WORK RESULTING FROM CHANGED CONDITIONS UNLESS THE ENGINEER OR OWNER HAS APPROVED THE WORK IN WRITING AS PER SECTION 1-04.7 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.
- ALL UTILITY TRENCHES AND BORROW PITS SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 TEST METHOD.
- GROUNDWATER CONDITIONS VARY SEASONALLY. THE CONTRACTOR IS REQUIRED TO REVIEW THE PROJECT GEOTECHNICAL ENGINEERING REPORT, PERFORM A SITE VISIT, AND OTHERWISE COMMUNICATE WITH THE GEOTECHNICAL ENGINEER TO FAMILIARIZE HIMSELF WITH GROUNDWATER CONDITIONS ON-SITE. DEWATERING OF UTILITY TRENCHES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND INCORPORATED INTO THE VARIOUS BID ITEMS. CONTRACTOR SHALL DEVELOP A DEWATERING PLAN AS NECESSARY AND COORDINATE THE DISCHARGE LOCATION WITH THE SOILS ENGINEER. DEWATERING MAY BE ACCOMPLISHED BY PUMPING FROM A SUMP IN THE UTILITY TRENCH OR BY WELL POINTS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF THE SITE PREPARATION, GRADING, TRENCHING, AND BACKFILL OPERATIONS, AND PAVING CONSTRUCTION, AS APPLICABLE FOR THE PROJECT.
- ANY PROVISIONS OF THE SOILS REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRE FURTHER CLARIFICATION, SHALL BE BROUGHT TO THE ATTENTION OF THE SOILS ENGINEER.
- SOILS ENGINEER SHALL CONTRACT DIRECTLY WITH OWNER AND COORDINATE WITH CONTRACTOR. CONTRACTOR TO ENSURE A REPRESENTATIVE FOR THE SOILS ENGINEER IS AVAILABLE AND ON-SITE TO OBSERVE AND APPROVE THE EARTHWORK OPERATIONS AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS CERTIFYING THAT THE METHODS AND MATERIALS OF THE EARTHWORK OPERATIONS WERE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS INVESTIGATION AND THAT THE WORK WAS PERFORMED TO THE SATISFACTION OF THE SOILS ENGINEER. ANY DISCREPANCIES ARE TO BE BROUGHT TO OWNER'S ATTENTION IN WRITING.

APPROVED FOR CONSTRUCTION
KITTITAS COUNTY ENGINEER _____ DATE _____

REVISIONS		
NO.	DESCRIPTION/DATE	BY

LAURA G. BARTENHAGEN
 REGISTERED PROFESSIONAL ENGINEER
 No. 40111
 State of Washington

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Land Planning
 Project Management
 Landscape Architecture
 Civil Engineering
 Public Works

NEW SUNCADIA, LLC
NELSON RIDGE
 INFORMATION SHEET
 WASHINGTON
 KITTITAS COUNTY

JOB NO.: 998-812-020
 DWG. NAME: DT-01
 DESIGNED BY: LGB
 DRAWN BY: JHJ
 CHECKED BY:
 DATE: 04/16/2021
 DATE OF PRINT:
DT-01
 2 OF 29 SHEETS

File: \\server\ENR\ESM-JOB\998-812-020\plans\DT-01.dwg
 Plotted: 4/13/2021 9:15 AM
 Plotted By: Greg Feltore

ENGINEER'S CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AND THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (LATEST EDITION), KITTITAS COUNTY, SUNCADIA WATER COMPANY (SWC), SUNCADIA ENVIRONMENTAL COMPANY (SEC) AND NEW SUNCADIA, LLC STANDARDS AND SPECIFICATIONS. SWC AND SEC RESERVE THE RIGHT TO ADJUST WATER AND SEWER REQUIREMENTS BASED ON CONDITIONS IN THE FIELD, PRODUCT AVAILABILITY, AND UPDATES TO OPERATIONS AND MAINTENANCE PRACTICES. THE STATE STANDARD SPECIFICATIONS AND PLANS SHALL BE MAINTAINED BY THE CONTRACTOR ON SITE DURING THE ENTIRE PERIOD OF THE CONSTRUCTION. DEFINITIONS NOTED AS "STATE" AND "CONTRACTING AGENCY" SHALL BE AMENDED TO READ "OWNER".
- ROAD STANDARDS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN EXHIBIT "J" TO THE AMENDED AND RESTATED DEVELOPMENT AGREEMENT FOR THE SUNCADIA MASTER PLANNED RESORT DATED DECEMBER 2, 2008. THE MOST STRINGENT SPECIFICATION, INSTRUCTION, RULE AND/OR PLAN SHALL GOVERN THE SELECTION OF CONFLICTING AND/OR OVERLAPPING SPECIFICATIONS AND/OR PLANS.
- BEFORE ANY CONSTRUCTION OR DEVELOPMENT ACTIVITY, A PRECONSTRUCTION MEETING MUST BE HELD BETWEEN THE CONSTRUCTION REPRESENTATIVE AND THE OWNER.
- UTILITIES AND GRADES SHALL BE CONSTRUCTED PER THE APPROVED PLANS. A COPY OF THE APPROVED PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- CONSTRUCTION WORK HOURS FOR THE MASTER PLANNED RESORT (MPR) SHALL BE FROM 7:00 A.M. UNTIL 7:00 P.M. MONDAY THROUGH SATURDAY. WORK ON SUNDAYS WILL BE ON AN EMERGENCY BASIS ONLY. EQUIPMENT SERVICING AND MAINTENANCE TIMES WILL BE UNRESTRICTED.
- EXCEPT FOR EMERGENCY WORK, CONSTRUCTION CONTRACTOR SHALL NOT, ON OR WITHIN FIVE HUNDRED (500) FEET OF ANY NOISE SENSITIVE PROPERTY, OPERATE OR CAUSE TO BE OPERATED ANY EQUIPMENT USED IN CONSTRUCTION, REPAIR, ALTERATION, EXCAVATION, GRADING OR DEMOLITION WORK ON BUILDINGS, STRUCTURES, STREETS, ALLEYS, OR APPURTENANCES THERETO:
 - WITH SOUND-CONTROL DEVICES LESS EFFECTIVE THAN THOSE PROVIDED ON THE ORIGINAL EQUIPMENT; AND
 - WITH NOISE LEVELS EXCEEDING:
 - 80 DB DURING ANY CALENDAR DAY FOR MORE THAN THREE (3) CONSECUTIVE OR NON-CONSECUTIVE CALENDAR DAYS IN A THREE HUNDRED SIXTY-FIVE (365) DAY PERIOD. NOISE DETERMINATION TESTS SHALL BE FOR AT LEAST TEN (10) MINUTES, WITH ANY FOUR (4) TESTS IN CONSECUTIVE OR NON-CONSECUTIVE CLOCK HOURS ABOVE THE 80 DB LEVEL CONSTITUTING AN EXCEEDANCE FOR THAT DAY; OR
 - 90 DB DURING ANY CLOCK HOUR FOR MORE THAN FOUR (4) CONSECUTIVE OR NON-CONSECUTIVE CLOCK HOURS. TESTS SHALL BE FOR AT LEAST TEN (10) MINUTES, WITH ANY SINGLE TEST ABOVE THE 90 DB LEVEL CONSTITUTING AN EXCEEDANCE FOR THAT HOUR; OR
 - A NOISE SENSITIVE PROPERTY SHALL MEAN ANY NON-OWNER PROPERTY OUTSIDE THE MPR. THE LOCATION OF SOUND LEVEL MEASUREMENTS SHALL BE ON ANY RECEIVING NOISE-SENSITIVE PROPERTY OUTSIDE THE MPR, PROVIDED THAT EACH TEST IS TAKEN FROM THE SAME PROPERTY, AND THE PROVISIONS IN THIS SECTION SHALL APPLY TO THAT SPECIFIC TEST LOCATION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL CONSTRUCTION EASEMENTS AND RIGHT-OF-WAY PERMITS NECESSARY BEFORE INITIATING OFF-SITE WORK WITHIN THE ROAD RIGHT-OF-WAY.
- FRANCHISED UTILITIES OR OTHER INSTALLATIONS THAT ARE NOT SHOWN ON THESE APPROVED PLANS SHALL NOT BE CONSTRUCTED UNLESS A SEPARATE SET OF PLANS HAS BEEN APPROVED BY THE REVIEWING AUTHORITY.
- OPEN CUTTING OF EXISTING ROADWAYS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY KITTITAS COUNTY, OR OWNER (AS APPROPRIATE) AND NOTED ON THESE APPROVED PLANS. APPROVED CUTS OF EXISTING ROADS SHALL BE PERFORMED WITH A NEAT SAW CUT AND RESTORED PER THE APPROPRIATE JURISDICTIONAL STANDARDS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF WORKERS AND THE PUBLIC, AND TO PROTECT PROPERTY AND WORK PERFORMED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT INTERRUPTS NORMAL TRAFFIC FLOW REQUIRES AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. ALL SECTIONS OF THE WSDOT/APWA STANDARD SPECIFICATIONS 1-07.23, PUBLIC CONVENIENCE AND SAFETY, SHALL APPLY.
- CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, HE IS REQUIRED TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION. THIS INCLUDES SAFETY OF ALL PERSONS AND PROPERTY. THIS RESPONSIBILITY SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR IS TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
- EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHOWN ON THE PLAN ARE BASED UPON THE BEST AVAILABLE PUBLIC AND PRIVATE RECORDS, SURFACE UTILITY FEATURES OBTAINED BY SURVEY, AND VERBAL INFORMATION OBTAINED FROM REPRESENTATIVES OF FRANCHISED UTILITIES. NEITHER THE OWNER NOR THE ENGINEER GUARANTEES THE ACCURACY OR COMPLETENESS OF HIS INFORMATION AND ASSUME NO RESPONSIBILITY FOR IMPROPER LOCATIONS OR FAILURE TO SHOW UTILITY LOCATIONS ON THE CONSTRUCTION PLANS.
- THE CONTRACTOR SHALL CALL THE UTILITIES UNDERGROUND LOCATION CENTER (811) FOR FIELD LOCATION OF ALL UTILITIES AND SHALL NOT BEGIN EXCAVATION UNTIL ALL KNOWN UNDERGROUND UTILITIES IN THE VICINITY OF THE PROPOSED WORK HAVE BEEN LOCATED AND MARKED. FOR UTILITIES NOT SUBSCRIBING TO THE UNDERGROUND LOCATION CENTER, THE CONTRACTOR SHALL GIVE INDIVIDUAL NOTICE TO THE UTILITY AS PER SECTION 1-07.17 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.
- PRIOR TO COMMENCING SANITARY SEWER, STORM DRAIN, WATER MAIN AND OTHER UTILITY SERVICES, THE CONTRACTOR SHALL VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF THE PROPOSED TIE-IN LOCATIONS. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCIES OR ALTERED LOCATION OF PROPOSED TIE-INS TO THE ENGINEER AND PUBLIC AGENCY(S).
- IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE ENGINEER. THE CONTRACTOR SHALL RESTORE THE UTILITY TO ITS EXISTING CONDITION AS PER SECTION 1-07.17 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.
- TRACER WIRE SHALL BE INSTALLED ON ALL PVC AND HDPE PIPES.
- DETECTABLE UNDERGROUND WARNING TAPE SHALL CONSIST OF INERT POLYETHYLENE PLASTIC THAT IS IMPERVIOUS TO ALL KNOWN ALKALIS, ACIDS, CHEMICAL REAGENTS, AND SOLVENTS LIKELY TO BE ENCOUNTERED IN THE SOIL, WITH A METALLIC OIL CORE TO PROVIDE FOR THE MOST POSITIVE DETECTION AND PIPELINE LOCATION. THE TAPE SHALL BE COLOR CODED AND SHALL BE IMPRINTED CONTINUOUSLY OVER ITS ENTIRE LENGTH IN PERMANENT BLACK INK INDICATING THE TYPE OF LINE BURIED BELOW AND SHALL ALSO HAVE THE WORD "CAUTION" PROMINENTLY SHOWN. COLOR CODING OF THE TAPE SHALL BE AS FOLLOWS:

UTILITY	TAPE COLOR
WATER	BLUE
SEWER	GREEN
ELECTRICAL	RED
GAS/OIL	YELLOW
TELEPHONE/CATV/ORANGE	
NON-POTABLE WATER	PURPLE
- AIR AND WATER POLLUTION LAWS - THE ATTENTION OF THE CONTRACTOR IS CALLED TO THE STATUTES OF THE STATE OF WASHINGTON RELATING TO THE POLLUTION OF WATER AND AIR. THE CONTRACTOR SHALL CARRY OUT HIS OPERATIONS AND CONFORM WITH THE APPLICABLE SECTIONS OF THE STATE AND FEDERAL STATUTES AND ALL REGULATIONS ADOPTED PURSUANT THERETO.
- INSPECTION - THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE AGENCIES AND DEPARTMENTS FOR ALL REQUIRED INSPECTIONS PRIOR TO PLACING ANY UTILITIES INTO SERVICE.
- THE CONTRACTOR SHALL MAINTAIN AT THE JOB SITE ONE FULL SIZE, REPRODUCIBLE SET OF THE APPROVED DRAWINGS AND ANY SUPPLEMENTAL DRAWINGS FOR RECORD KEEPING. ALL CHANGES MADE DURING THE COURSE OF CONSTRUCTION INCLUDING INVERT, DEPTHS AND LOCATION OF ALL UTILITIES ENCOUNTERED, ETC., SHALL BE NEATLY MARKED ON THE REPRODUCIBLES. SEWER STUB LOCATIONS SHALL BE MARKED WITH LENGTH OF PIPE FROM SEWER MAIN, DISTANCE FROM NEAREST LOT LINE, AND STUB DEPTH. THE MARKED UP REPRODUCIBLES SHALL BE DELIVERED TO THE ENGINEER UPON COMPLETION OF THE WORK.
- CONTRACTOR SHALL COORDINATE FINAL WALKTHROUGH INSPECTIONS WITH APPROPRIATE AGENCIES AND DEPARTMENTS AND PROVIDE OWNER NOTICE OF DATE AND TIME OF INSPECTIONS WITH A WRITTEN INSPECTIONS COMPLETION LOG. CONTRACTOR TO INCLUDE ANY AGENCY REVISIONS ON PUNCH LIST AND PROVIDE ENGINEER AND OWNER WITH REVISED WRITTEN PUNCH LIST AND COMPLETE PUNCH LIST ITEMS IN A TIMELY MANNER AND COORDINATE RE-INSPECTION.
- UNAUTHORIZED CHANGES AND USES - CAUTION: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL REQUESTS FOR CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
- PRIOR TO TRANSPORTING ANY OVERSIZED OR OVERWEIGHT HAULS ON WSDOT-MAINTAINED RIGHTS-OF-WAY, THE CONTRACTOR SHALL OBTAIN THE APPROPRIATE PERMIT FROM RELEVANT JURISDICTIONS SUCH AS WSDOT, KITTITAS COUNTY, CITY OF CLE ELUM, AND CITY OF ROSLYN.

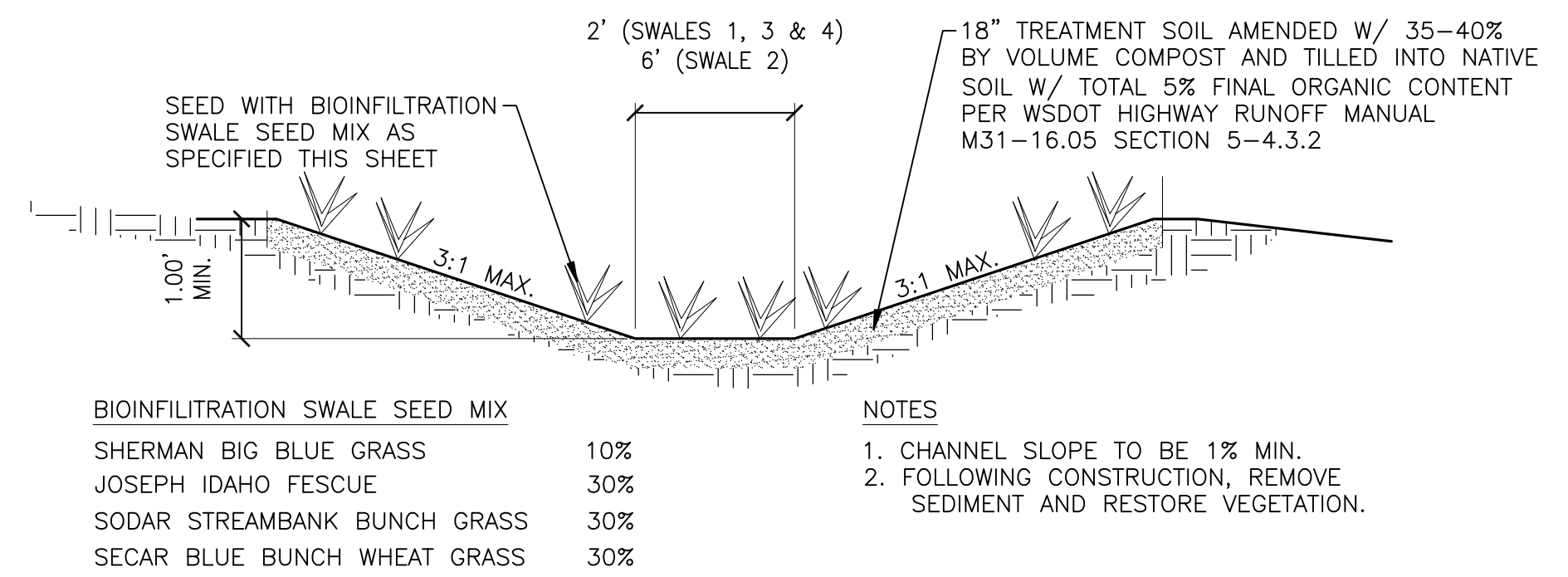
DRAINAGE SPECIFICATIONS

- STORMWATER STRUCTURES, CULVERTS AND CONDUITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION, LATEST EDITION (ENGLISH UNITS) EXCEPT AS OTHERWISE SPECIFIED. CONSTRUCTION SHALL CONFORM TO THE FOLLOWING SECTIONS OF SUCH STANDARDS SPECIFICATIONS:
 - 7-02 CULVERTS
 - 7-04 STORM SEWERS
 - 7-05 MANHOLES, INLETS, CATCH BASINS, AND DRY WELLS
 - 7-08 GENERAL PIPE INSTALLATION
 - 9-05 DRAINAGE STRUCTURES, CULVERTS AND CONDUITS
- CONSTRUCTION OF STORM DRAINAGE FACILITIES SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AS APPROVED BY THE COUNTY ENGINEER.
- BACKFILL MATERIAL SHALL BE BANK RUN GRAVEL FOR TRENCH BACKFILL PER SECTIONS 9-03.19 OF THE WSDOT/APWA STANDARD SPECIFICATIONS, OR, WITH THE APPROVAL OF THE PROJECT GEOTECHNICAL ENGINEER, NATIVE MATERIAL OF SIMILAR CHARACTERISTICS TO BANK RUN GRAVEL FOR TRENCH BACKFILL.
- ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 TEST METHOD.
- ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY SHALL HAVE SOLID LOCKING LIDS.
- ALL CONCRETE STORM DRAINAGE CATCH BASINS SHALL BE WSDOT/APWA TYPE 1 MEETING THE REQUIREMENTS OF ASTM C-478 (WSDOT STANDARD PLAN B-1) UNLESS OTHERWISE NOTED AS TYPE 1L. TYPE 1L CATCH BASINS SHALL CONFORM WITH WSDOT STANDARD PLAN B-1g EXCEPT THE MAXIMUM DEPTH SHALL BE 6 FEET. ALL CATCH BASIN COVERS SHALL BE PER ASTM A-536 AND WSDOT/APWA STANDARDS. CATCH BASINS DEEPER THAN 6 FEET (RIM TO INVERT) SHALL BE PRECAST TYPE 2 (WSDOT STANDARD PLAN B-1E) MEETING THE REQUIREMENTS OF ASTM C-478 AND JOINTS MEETING THE REQUIREMENTS OF ASTM C-443. TYPE 2 CATCH BASINS SHALL BE EQUIPPED WITH SAFETY STEPS PER WSDOT/APWA STANDARD PLANS. SAFETY STEPS SHALL BE ORIENTED IN THE CATCH BASIN SUCH THAT IMPEDIMENTS TO ENTRY ARE A MINIMUM OF 24-INCHES FROM THE STEPS.
- ALL STORM DRAIN AND CULVERT PIPE (SD) SHALL BE CONSTRUCTED OF ONE OF THE FOLLOWING MATERIALS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
 - DUCTILE IRON (DI) - 24-INCH DIAMETER AND SMALLER SHALL BE CLASS 50 CONFORMING TO AWWA C-151 (WHEN SHOWN ON THE PLANS.)
 - CONCRETE (CONC) - 4-INCH THROUGH 12-INCH DIAMETER PIPE SHALL BE NON-REINFORCED, BELL AND SPIGOT WITH RUBBER GASKET JOINTS, CONFORMING TO ASTM C-14 (CLASS 3), OR ASTM C-76 (CLASS 3) FOR 12-INCH TO 36-INCH DIAMETER PIPE.
 - PVC - 4-INCH THROUGH 15-INCH DIAMETER PIPE, SHALL BE IN ACCORDANCE WITH ASTM D-3034 SDR 35 AND ASTM F-679 FOR 18-INCH TO 24-INCH PIPE. ALL JOINTS SHALL BE PUSH-ON RUBBER GASKET CONFORMING TO ASTM F-477.
 - CORRUGATED HIGH DENSITY POLYETHYLENE PIPE WITH SMOOTH INTERIOR, CONFORMING TO AASHTO DESIGNATION M-294S.
 - HIGH DENSITY POLYETHYLENE PIPE (HDPP): HDPP SHALL COMPLY WITH THE REQUIREMENTS OF AWWA C906 FOR PIPE MATERIALS AND PRESSURE RATING AS FOLLOWS:

STANDARD PE CODE DESIGNATION	STANDARD DIMENSION RATIO	PRESSURE CLASS
- PE 3408	- MAXIMUM 32.5	- MINIMUM 50 PSYG
- ALL PIPE COUPLINGS SHALL BE WATERTIGHT TO 2 PSI (MINIMUM). MINIMUM COVER AT ALL TIMES SHALL BE 1.5 FEET OR 1 FOOT FOR DUCTILE IRON. ADAPTERS AT MANHOLES AND CATCH BASINS SHALL BE WATERTIGHT TO 6.5 PSI (MINIMUM).
- ALL LOT DRAINAGE IS THE RESPONSIBILITY OF INDIVIDUAL PROPERTY OWNERS PER NEW SUNCADIA DESIGN STANDARDS.

ROADWAY SPECIFICATIONS

- ROADWAY CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD BRIDGE AND MUNICIPAL CONSTRUCTION, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION, LATEST EDITION (ENGLISH UNITS). EXCEPT AS OTHERWISE SPECIFIED, CONSTRUCTION SHALL CONFORM TO THE FOLLOWING SECTIONS OF SUCH STANDARDS SPECIFICATIONS:
 - 2-03 ROADWAY EXCAVATION AND EMBANKMENTS
 - 2-06 SUBGRADE PREPARATION
 - 2-07 WATERING
 - 2-09 STRUCTURE EXCAVATION
 - 2-11 TRIMMING AND CLEANUP
 - 4-02 GRAVEL BASE
 - 4-04 BALLAST AND CRUSHED SURFACING
 - 5-04 HOT MIX ASPHALT
 - 9-02 BITUMINOUS MATERIAL
 - 9-03 AGGREGATES
- PAVEMENT SECTIONS SHALL BE CONSTRUCTED AS SHOWN ON THESE PLANS.
- ALL ROADWAY SUBGRADE SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 TEST METHOD.
- OVER EXCAVATE TO REMOVE UNSUITABLE MATERIAL BELOW SUBGRADE AS DIRECTED BY THE GEOTECHNICAL ENGINEER. BACKFILL OVER EXCAVATED MATERIAL WITH GRAVEL BASE.
- ASPHALT CONCRETE SHALL BE HMA CI. 1/2" PG64-28.



NOTES:

- THE BIOINFILTRATION SWALE SHOULD NOT BE PUT INTO OPERATION UNTIL AREAS OF EXPOSED SOIL IN THE CONTRIBUTING DRAINAGE CATCHMENT HAVE BEEN SUFFICIENTLY STABILIZED.
- EFFECTIVE EROSION AND SEDIMENT CONTROL MEASURES SHOULD REMAIN IN PLACE UNTIL THE SWALE VEGETATION IS ESTABLISHED.
- AVOID COMPACTION DURING CONSTRUCTION. GRADE BIOINFILTRATION SWALES TO ATTAIN UNIFORM LONGITUDINAL AND LATERAL SLOPES.
- THE SWALE BOTTOM SHOULD BE FLAT WITH A LONGITUDINAL SLOPE LESS THAN 1%.
- INFILTRATION RATE TO BE FIELD VERIFIED BY GEOTECHNICAL ENGINEER.

BIO-INFILTRATION	SWALE #1	SWALE #2	SWALE #3	SWALE #4
SWALE SHAPE	TRAPEZOIDAL	TRAPEZOIDAL	TRAPEZOIDAL	TRAPEZOIDAL
BOTTOM WIDTH (FT)	2	6	2	2
TOTAL DEPTH (FT)	2.0	3.0	2.0	2.0

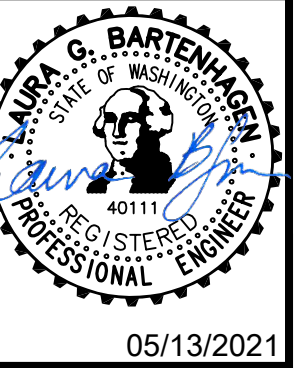
A BIOINFILTRATION SWALE DETAIL

NOT TO SCALE

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____ DATE _____

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NO.	DESCRIPTION/DATE	BY



05/13/2021

ESM CONSULTING ENGINEERS, LLC
35400 8th Ave S, Suite 205
Federal Way, WA 98003

FEDERAL WAY
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NEW SUNCADIA, LLC

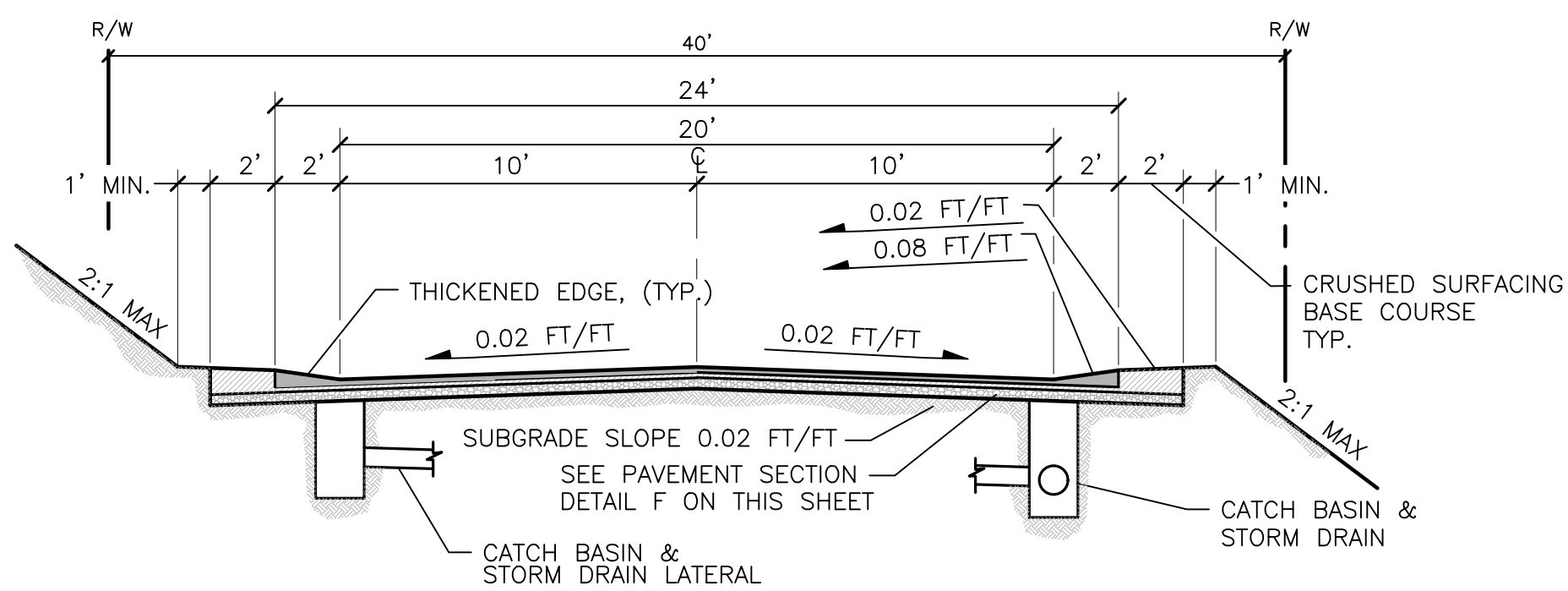
NELSON RIDGE
ROAD/STORM DETAILS & NOTES

KITTITAS COUNTY WASHINGTON

JOB NO.:	998-812-020
DWG. NAME:	DT-02
DESIGNED BY:	LGB
DRAWN BY:	JJH
CHECKED BY:	
DATE:	04/16/2021
DATE OF PRINT:	

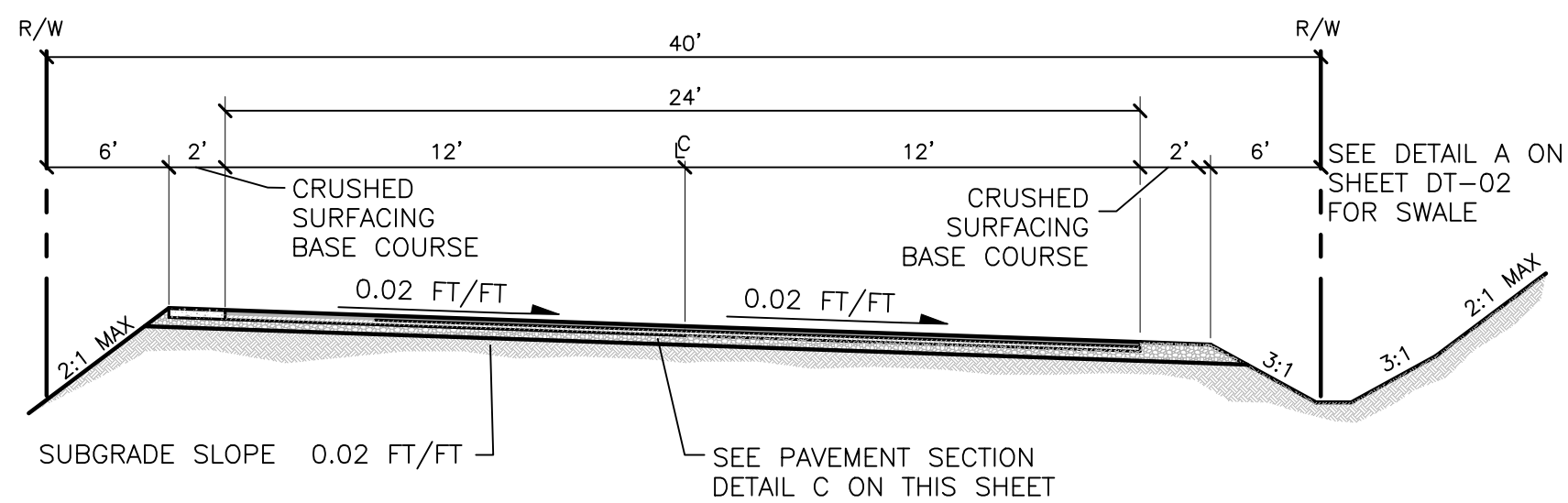
DT-02

3 OF 29 SHEETS



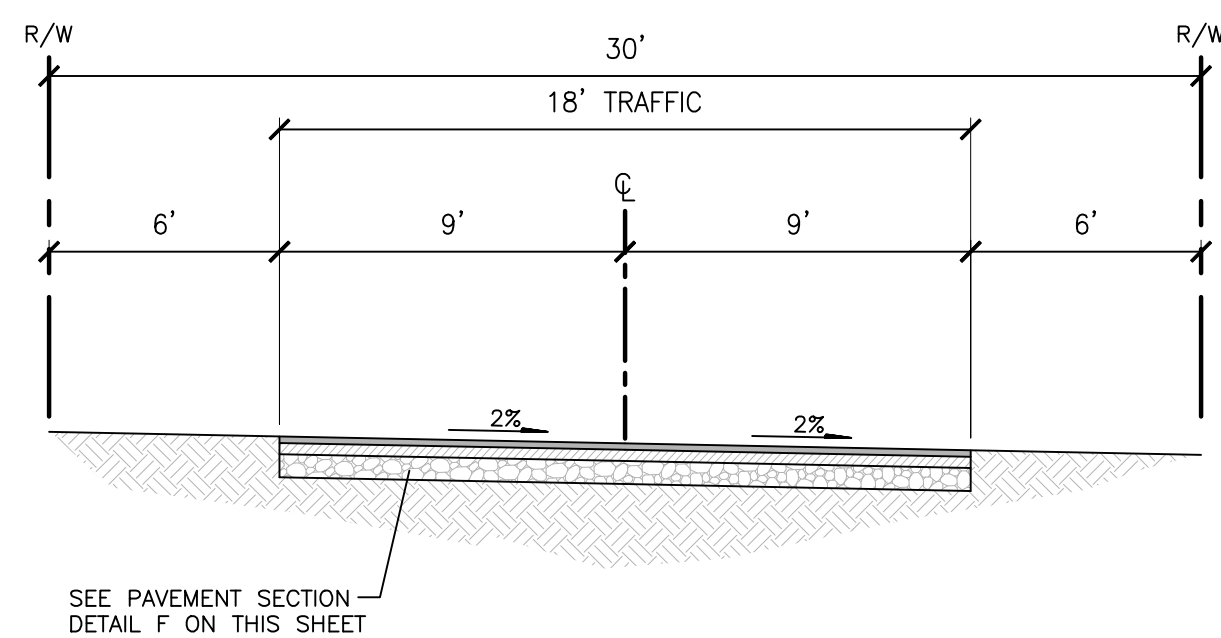
OLD GROVE TRAIL STA. 10+00.00 - 20+64.11 & 22+98.72 - 24+76.37
 RED SKY WAY STA. 28+00.00 - 35+22.52 & 39+25.67 - 39+82.43

A TYPE R-II
 MINOR RESIDENTIAL ROADWAY
 NOT TO SCALE

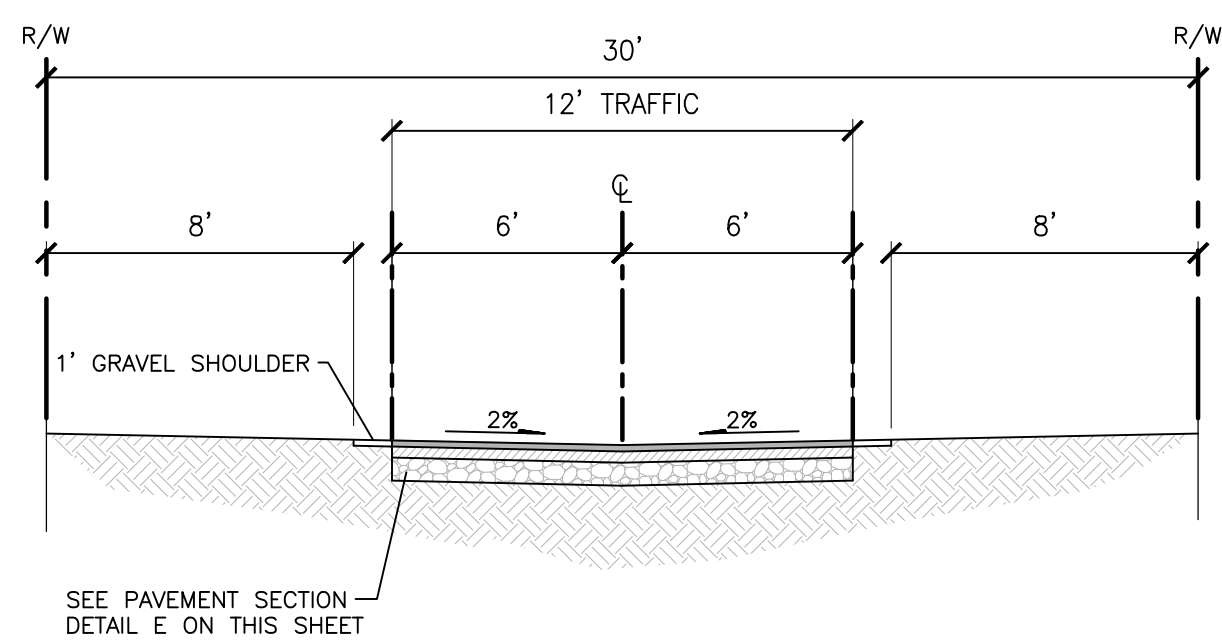


OLD GROVE TRAIL STA. 20+64.11 - 22+98.72
 RED SKY WAY STA. 35+22.52 - 39+25.67

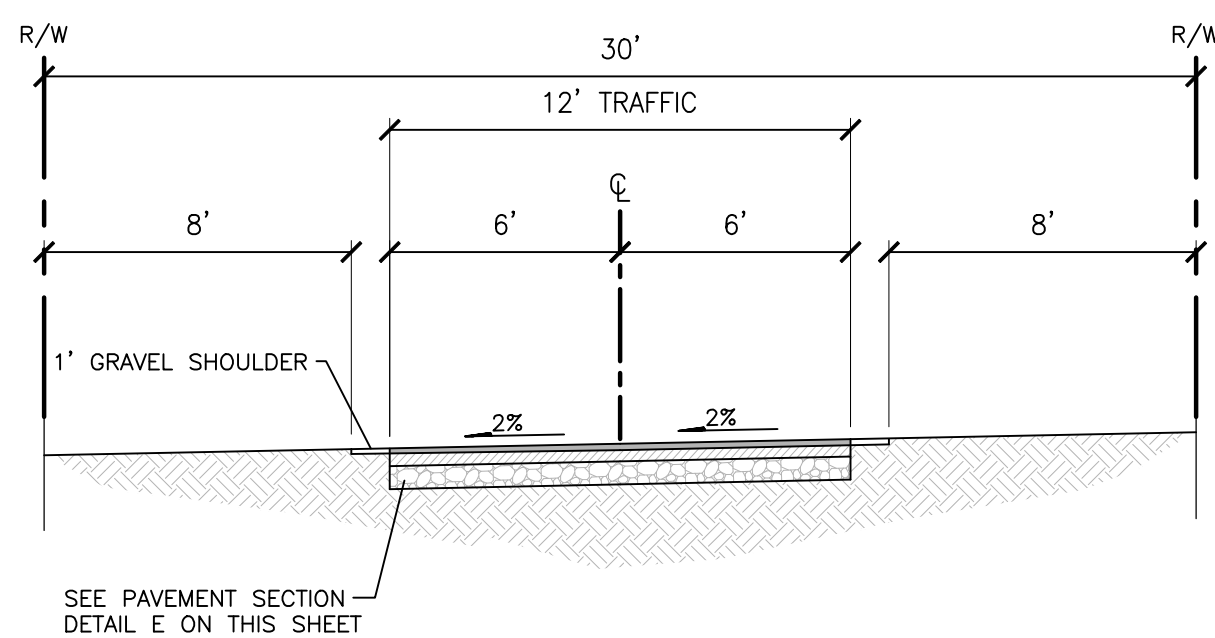
B TYPE R-II
 MINOR RESIDENTIAL ALT #2 ROADWAY
 NOT TO SCALE



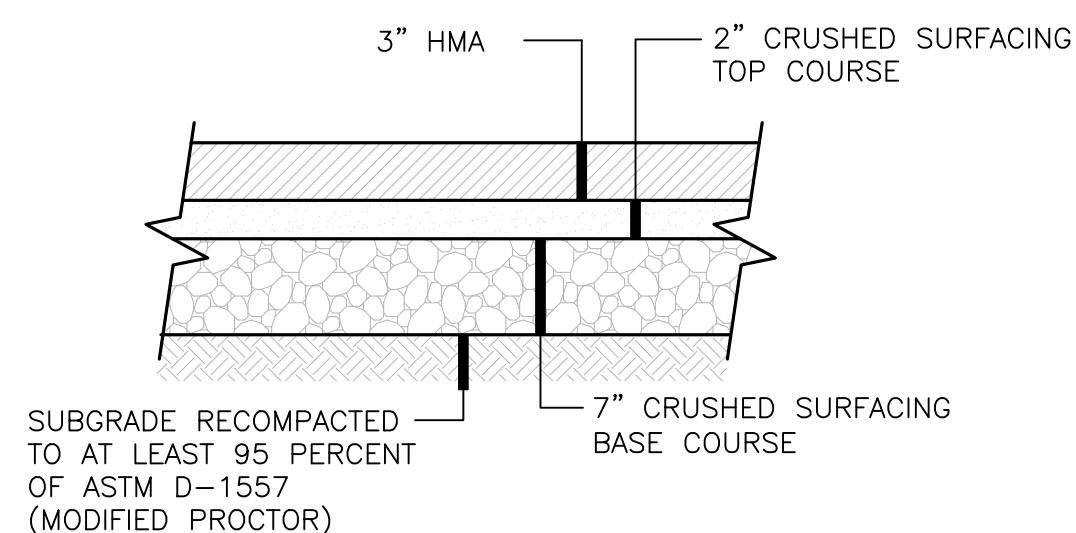
TRACT AC-1
C SECONDARY DRIVE
 NOT TO SCALE



TRACT AC-2
 TRACT AC-3
D SECONDARY DRIVE
 NOT TO SCALE

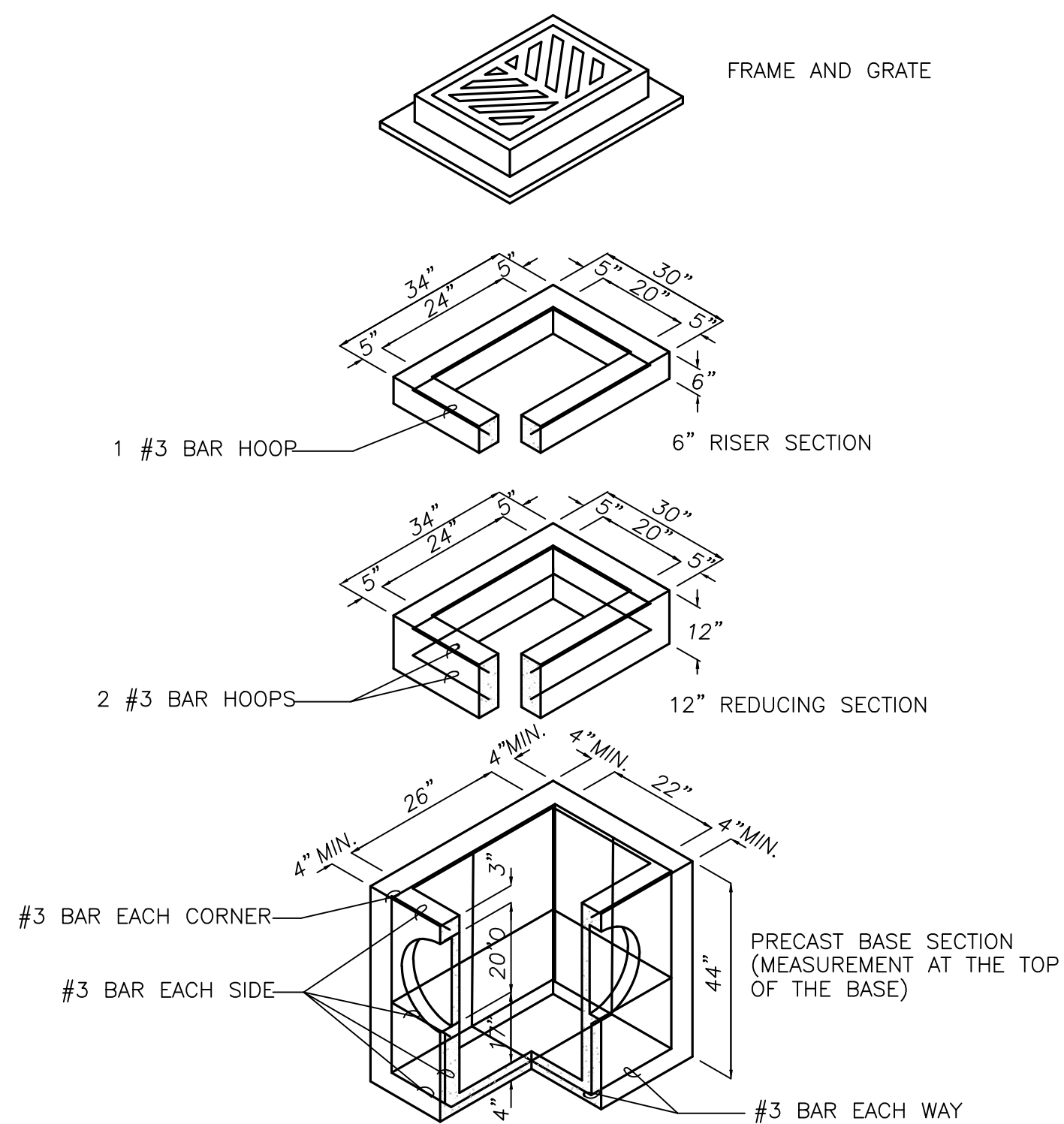


TRACT AC-4
E SECONDARY DRIVE
 NOT TO SCALE

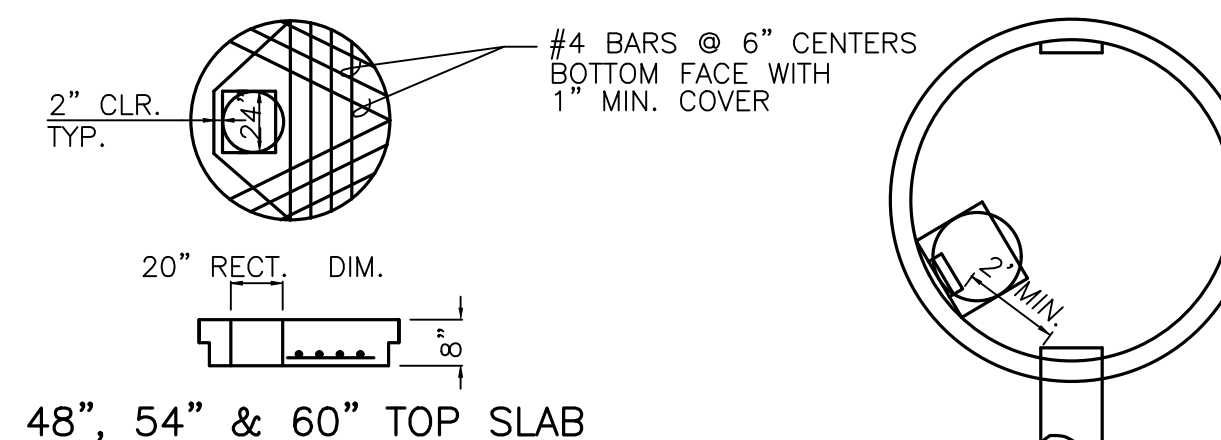


RESIDENTIAL ROADWAYS,
 AND JOINT UTILITY DRIVEWAY

F PAVEMENT SECTION DETAIL
 NOT TO SCALE



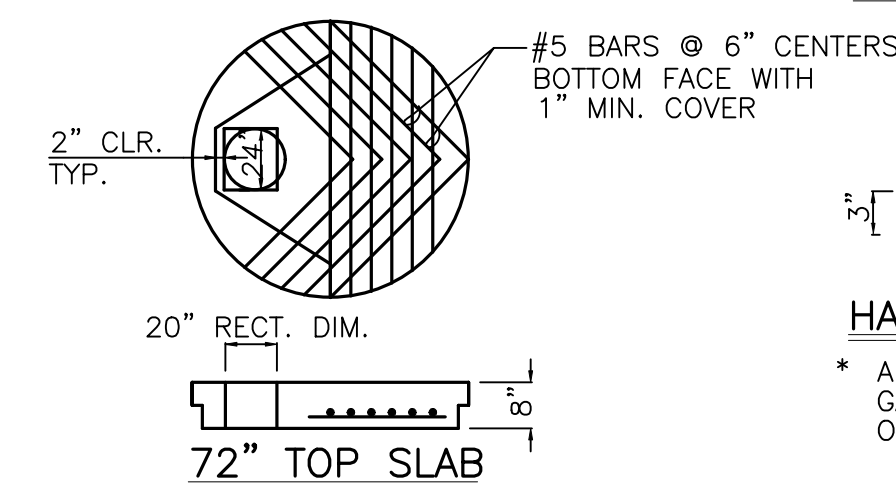
H TYPE 1 CATCH BASIN
 NOT TO SCALE



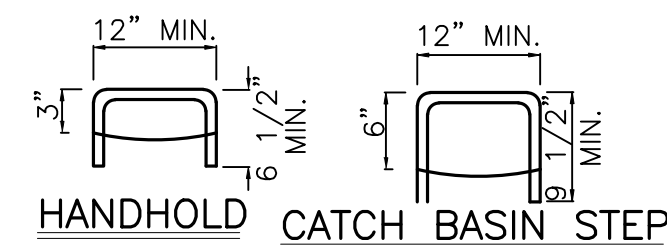
48", 54" & 60" TOP SLAB

TYPICAL ORIENTATION
 FOR ACCESS AND STEPS

NOTE:
 AS AN ACCEPTABLE ALTERNATE TO REBAR,
 WIRE MESH HAVING A MINIMUM AREA OF 0.12
 SQUARE INCHES PER FOOT MAY BE USED FOR
 ADJUSTMENT SECTIONS.

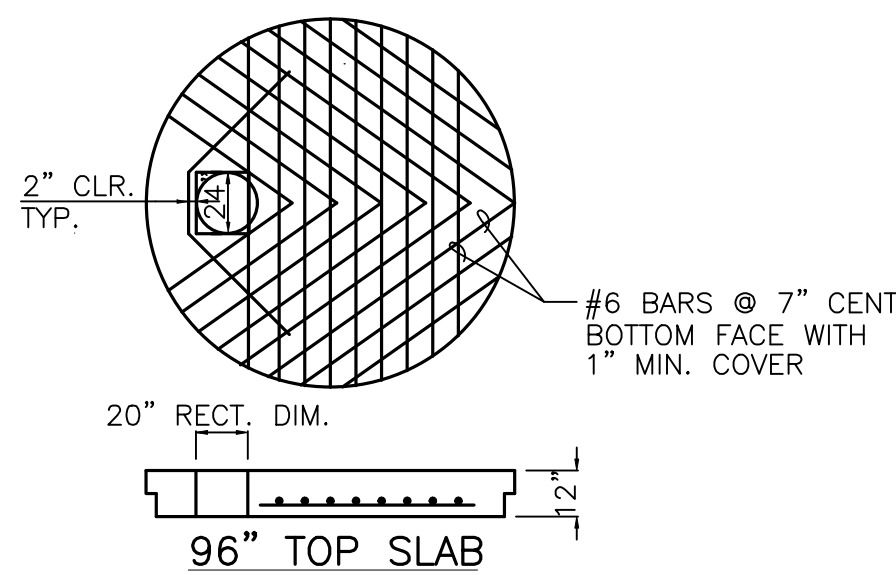


72" TOP SLAB

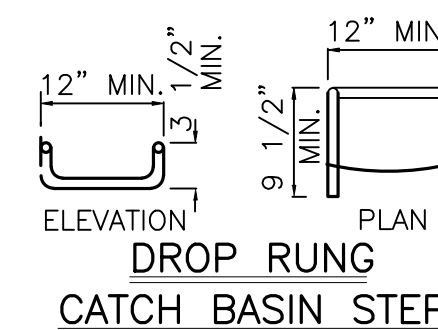


HANDHOLD CATCH BASIN STEP

* ALL STEPS & RUNGS #8
 GALV. DEFORMED REBAR
 OR COPOLYMER PROPYLENE.



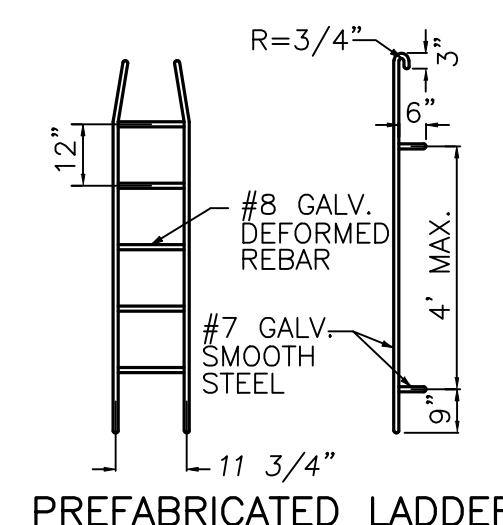
96" TOP SLAB



DROP RUNG
 CATCH BASIN STEP

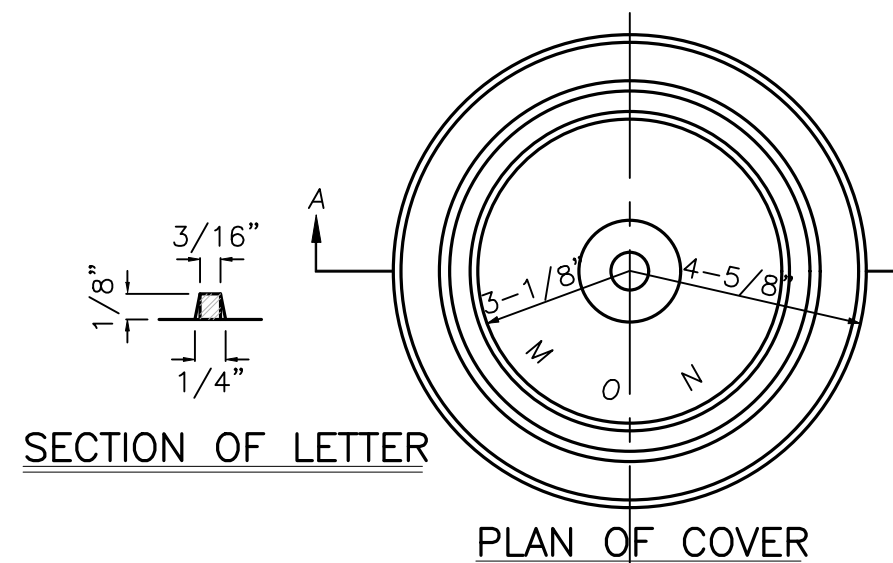
#8 GALV. DEFORMED REBAR
 #7 GALV. SMOOTH STEEL

GRADE RING



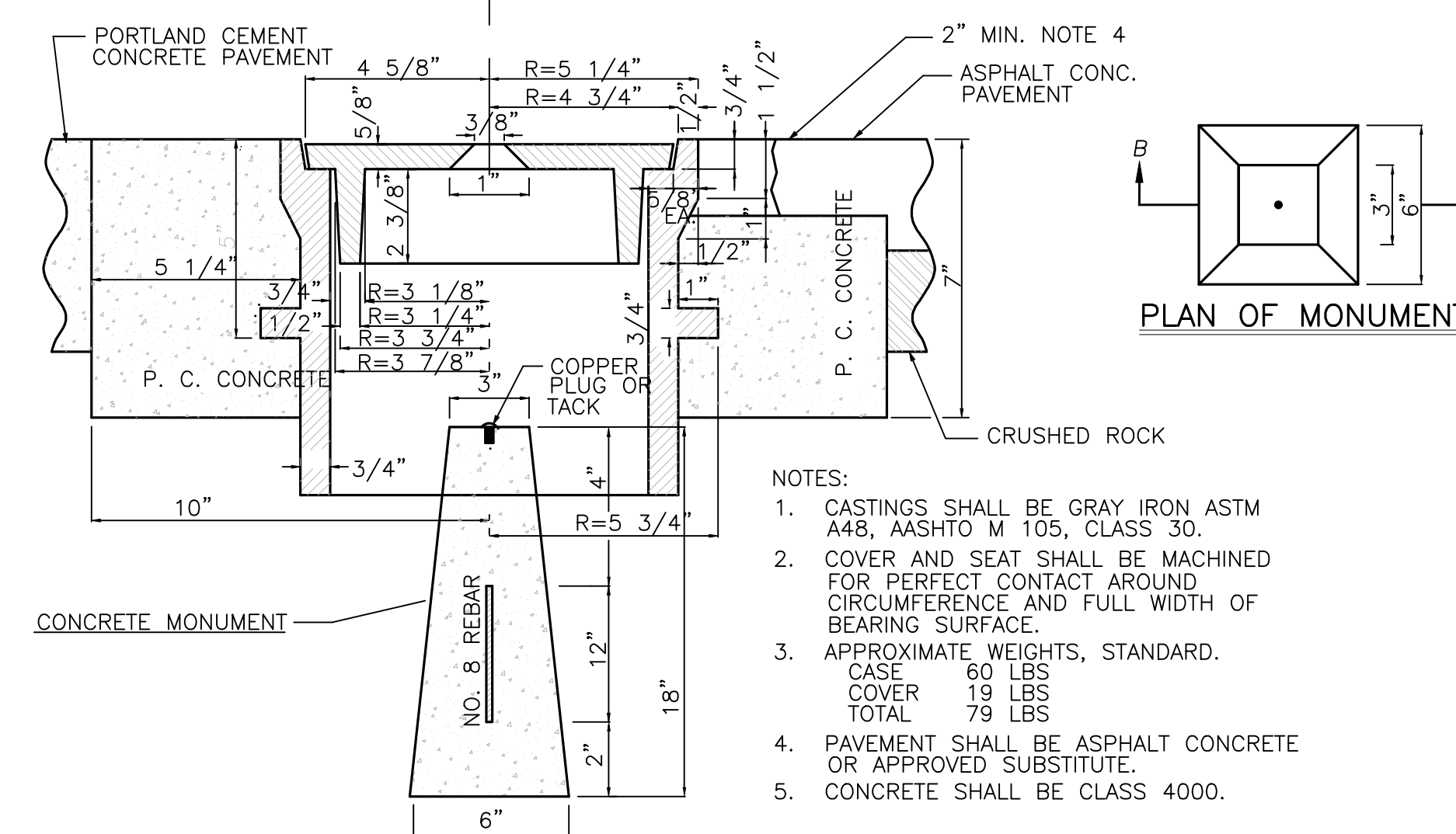
PREFABRICATED LADDER

G MISCELLANEOUS DETAILS
 NOT TO SCALE



SECTION OF LETTER

PLAN OF COVER



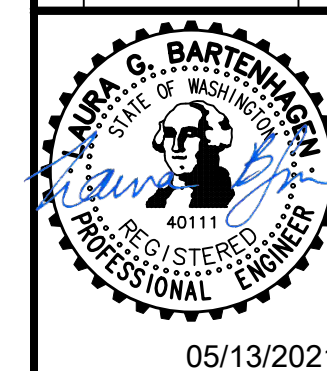
- NOTES:**
1. CASTINGS SHALL BE GRAY IRON ASTM A48, AASHTO M 105, CLASS 30.
 2. COVER AND SEAT SHALL BE MACHINED FOR PERFECT CONTACT AROUND CIRCUMFERENCE AND FULL WIDTH OF BEARING SURFACE.
 3. APPROXIMATE WEIGHTS, STANDARD.
 CASE 60 LBS
 COVER 19 LBS
 TOTAL 79 LBS
 4. PAVEMENT SHALL BE ASPHALT CONCRETE OR APPROVED SUBSTITUTE.
 5. CONCRETE SHALL BE CLASS 4000.

I ROADWAY SURVEY
 MONUMENT WITH CASE AND COVER
 NOT TO SCALE

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____ DATE _____

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ESM CONSULTING ENGINEERS, LLC
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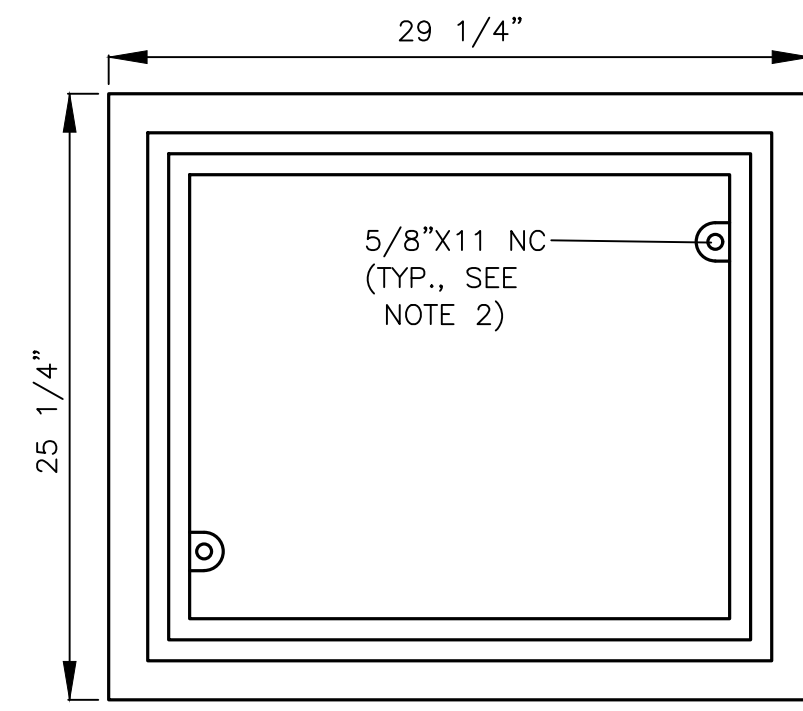
WASHINGTON

NEW SUNCADIA, LLC
 NELSON RIDGE
 ROAD/STORM DETAILS & NOTES

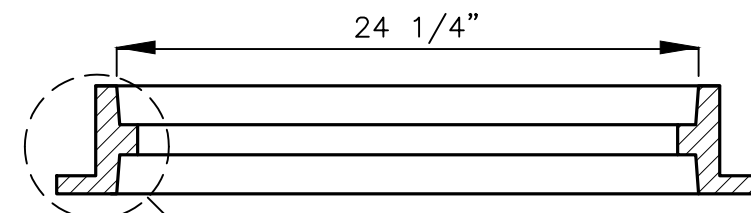
KITTITAS COUNTY

JOB NO.: 998-812-020
 DWG. NAME: DT-03
 DESIGNED BY: LGB
 DRAWN BY: JHJ
 CHECKED BY:
 DATE: 05/05/2021
 DATE OF PRINT:

DT-03



- NOTES:**
1. THIS FRAME IS DESIGNED TO ACCOMMODATE 20"x24" GRATES OR COVERS.
 2. WHEN BOLT DOWN GRATES OR COVERS ARE SPECIFIED, PROVIDE TWO HOLES IN THE FRAME THAT ARE VERTICALLY ALIGNED WITH THE GRATE OR COVER SLOTS. TAP EACH HOLE TO ACCEPT A 5/8"x11 NC X 2" ALLEN HEAD CAP SCREW. LOCATION OF BOLT HOLES VARIES AMONG DIFFERENT MANUFACTURERS.



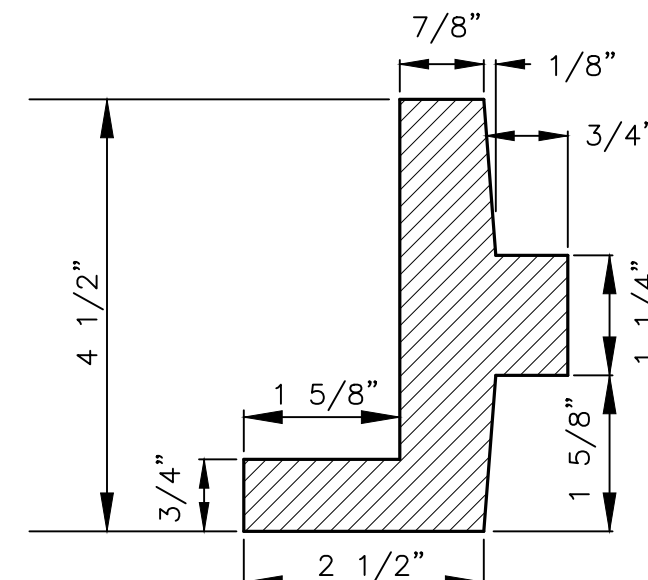
RECESSED ALLEN HEAD CAP SCREW (SEE NOTE 2)

GRATE OR SOLID COVER

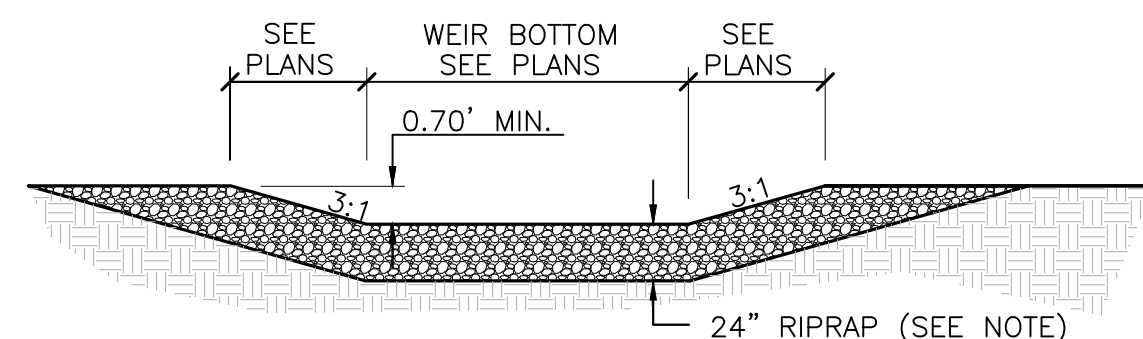
FRAME

BOLT DOWN DETAIL

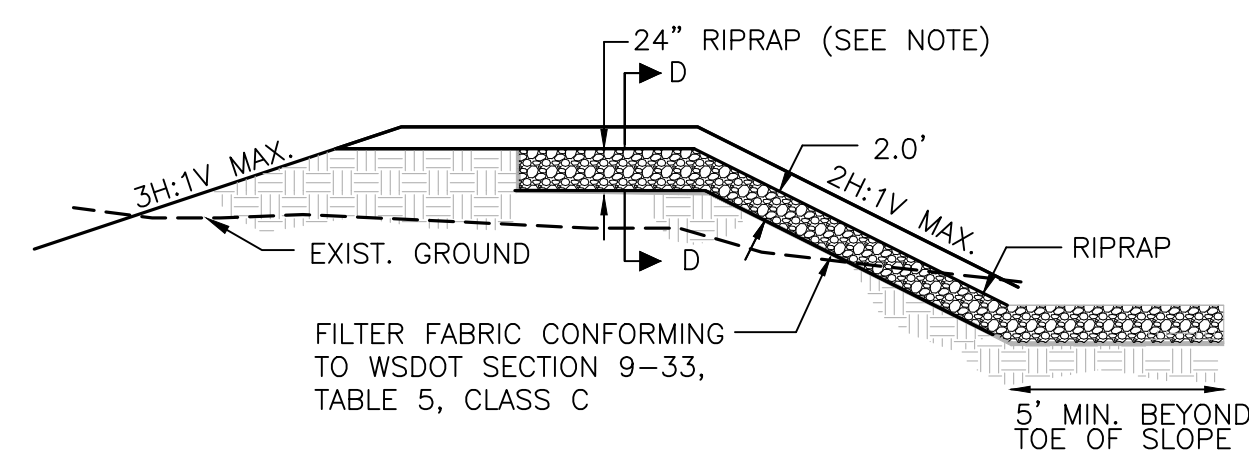
A LOCKING FRAME
NOT TO SCALE



DETAIL "A"

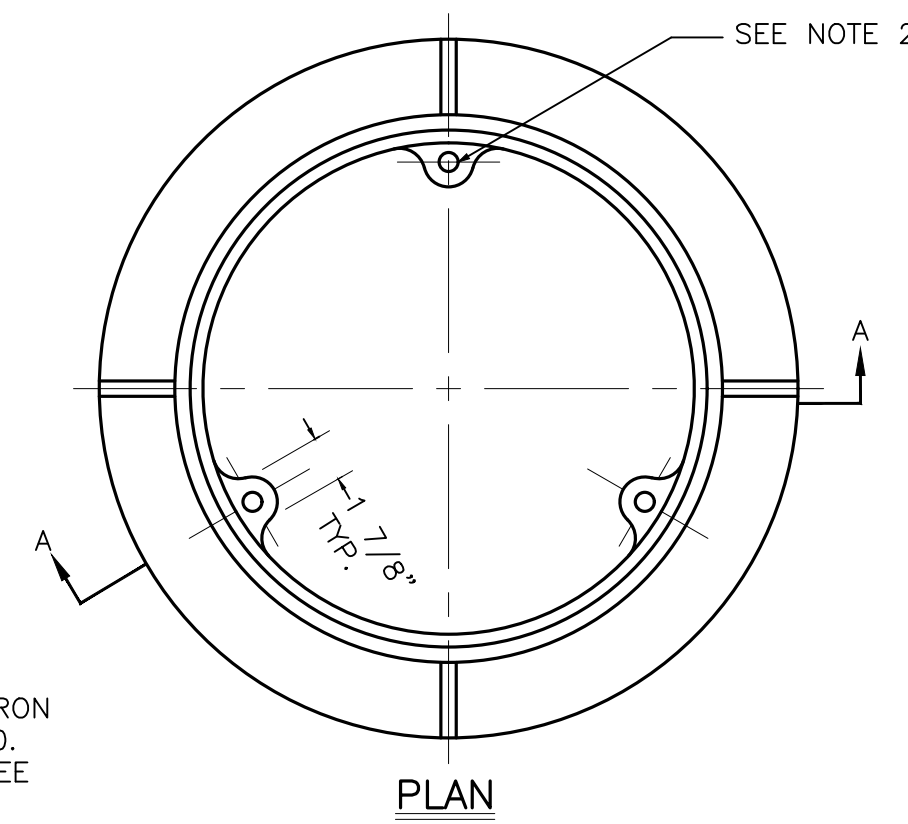


SECTION D-D

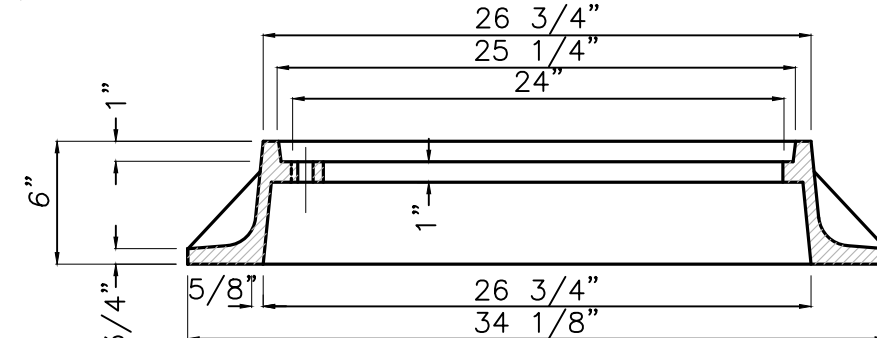


RIPRAP SHALL BE IN ACCORDANCE WITH SECTION 9.13.1(5) OF THE WSDOT/APWA STANDARD SPECIFICATIONS. RIPRAP TO BE REASONABLY WELL GRADED WITH ROCK GRADATION AS FOLLOWS:
 PASSING 8" SQUARE SIEVE 100% OR MAX STONE SIZE 12"
 PASSING 6" SQUARE SIEVE 40-60% OR MED STONE SIZE 6"
 PASSING 2" SQUARE SIEVE 0-10% OR MIN STONE SIZE 2"

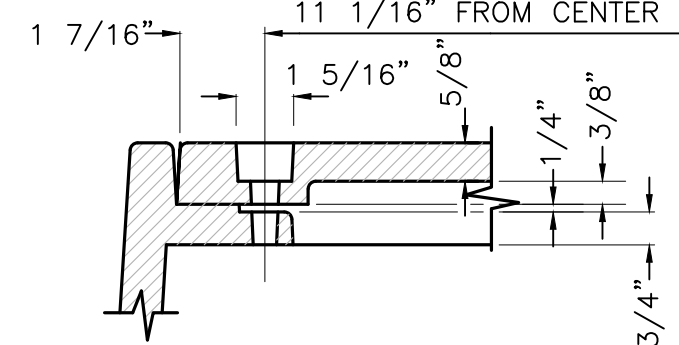
F OVERFLOW AND SPILLWAY
NOT TO SCALE



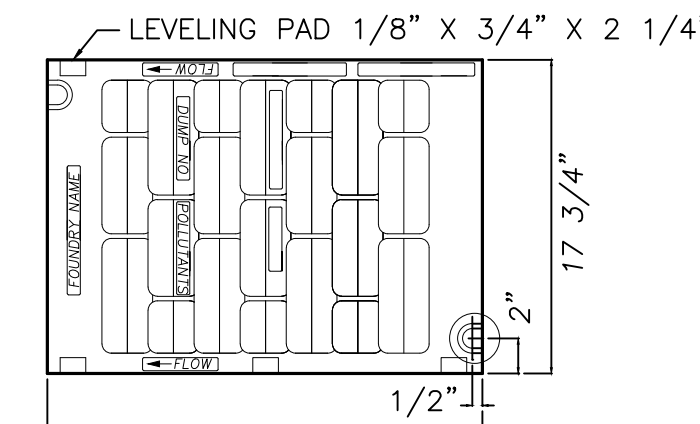
PLAN



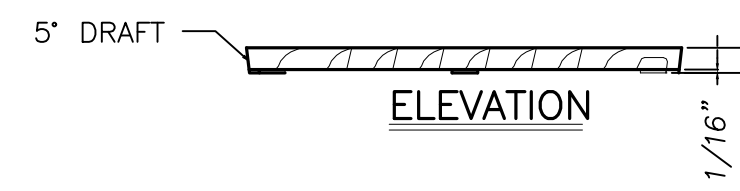
SECTION A-A



B LOCKING MANHOLE FRAME
NOT TO SCALE



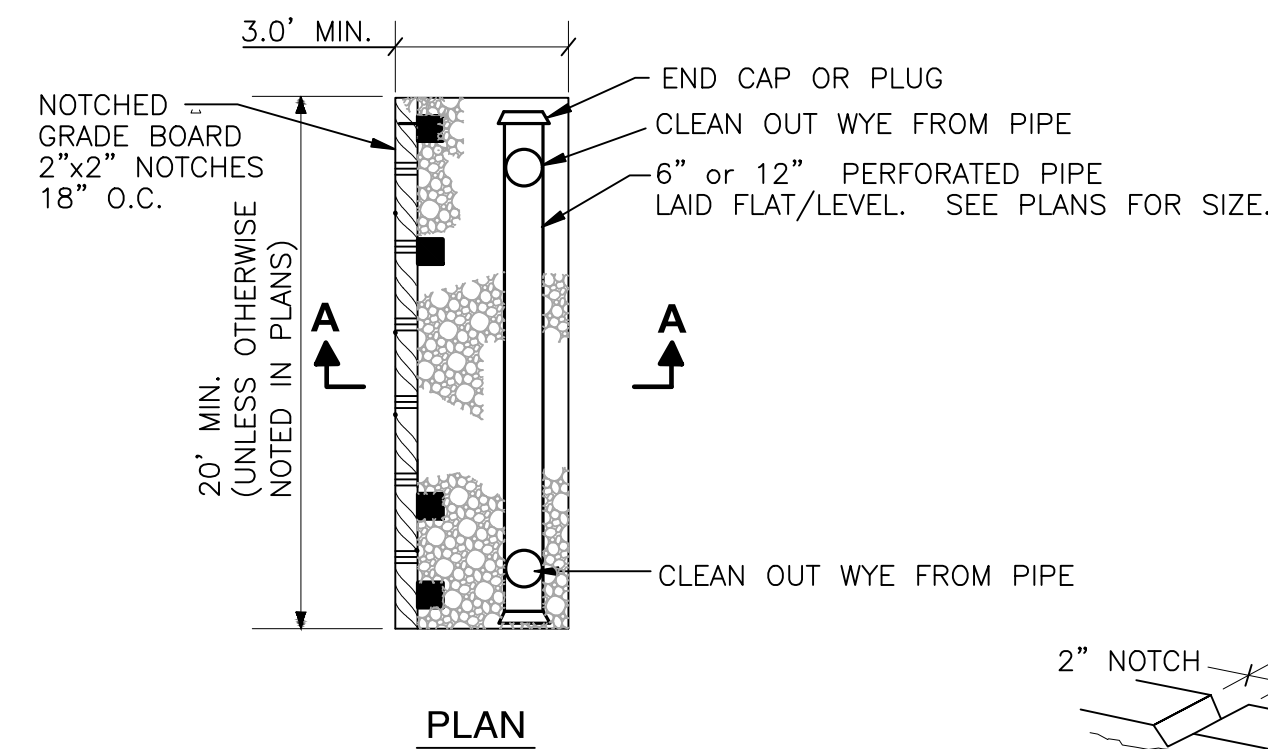
PLAN



ELEVATION

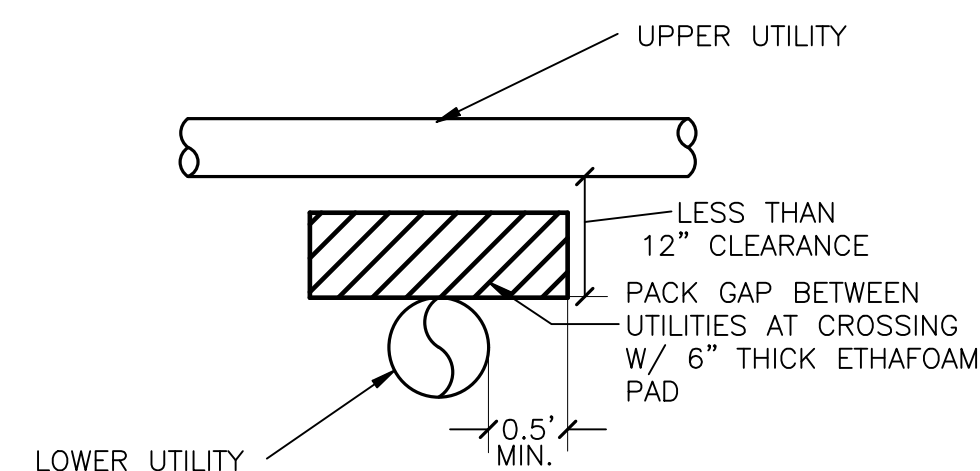
- NOTES:**
1. SELF-LOCK VANED GRATE MANUFACTURER SUBJECT TO APPROVAL BY ENGINEER.
 2. USE WITH TWO LOCKING BOLTS 5/8"-11 NC STAINLESS TYPE 304 STEEL SOCKET HEAD (ALLEN HEAD) CAP SCREWS 2" LONG. NOTE SLOT DETAIL.
 3. MATERIAL IS DUCTILE IRON ASTM A536 GRADE 80-55-06.
 4. "DUMP NO POLLUTANTS" MAY BE LOCATED ON BORDER AREA.

C LOCKING GRATE
NOT TO SCALE

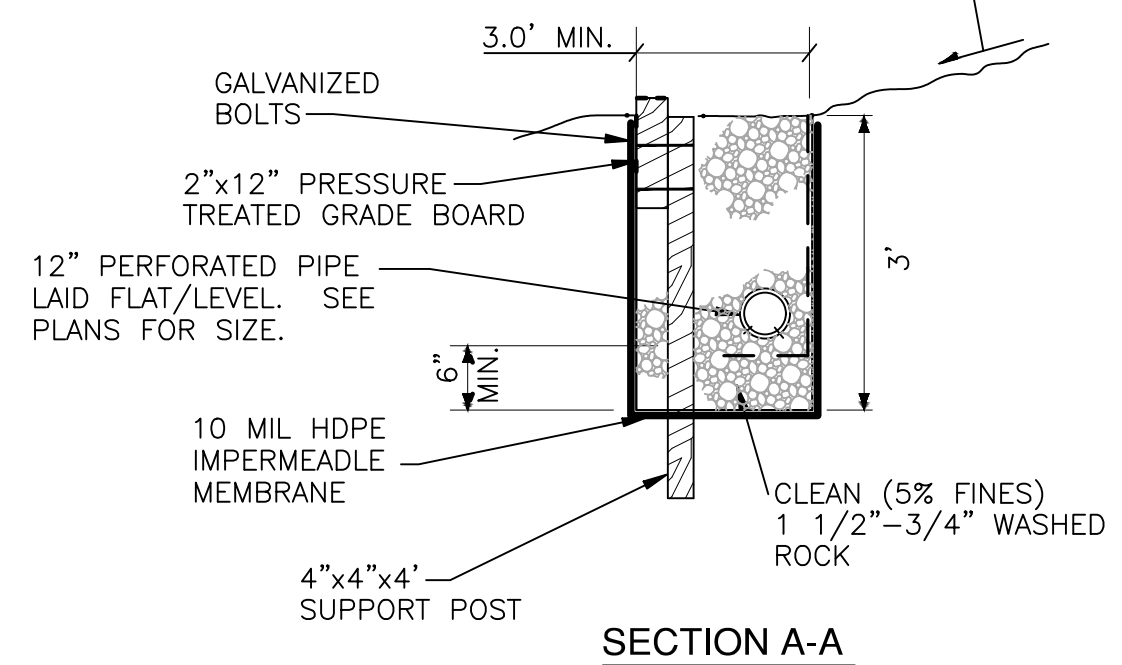


PLAN

SECTION A-A

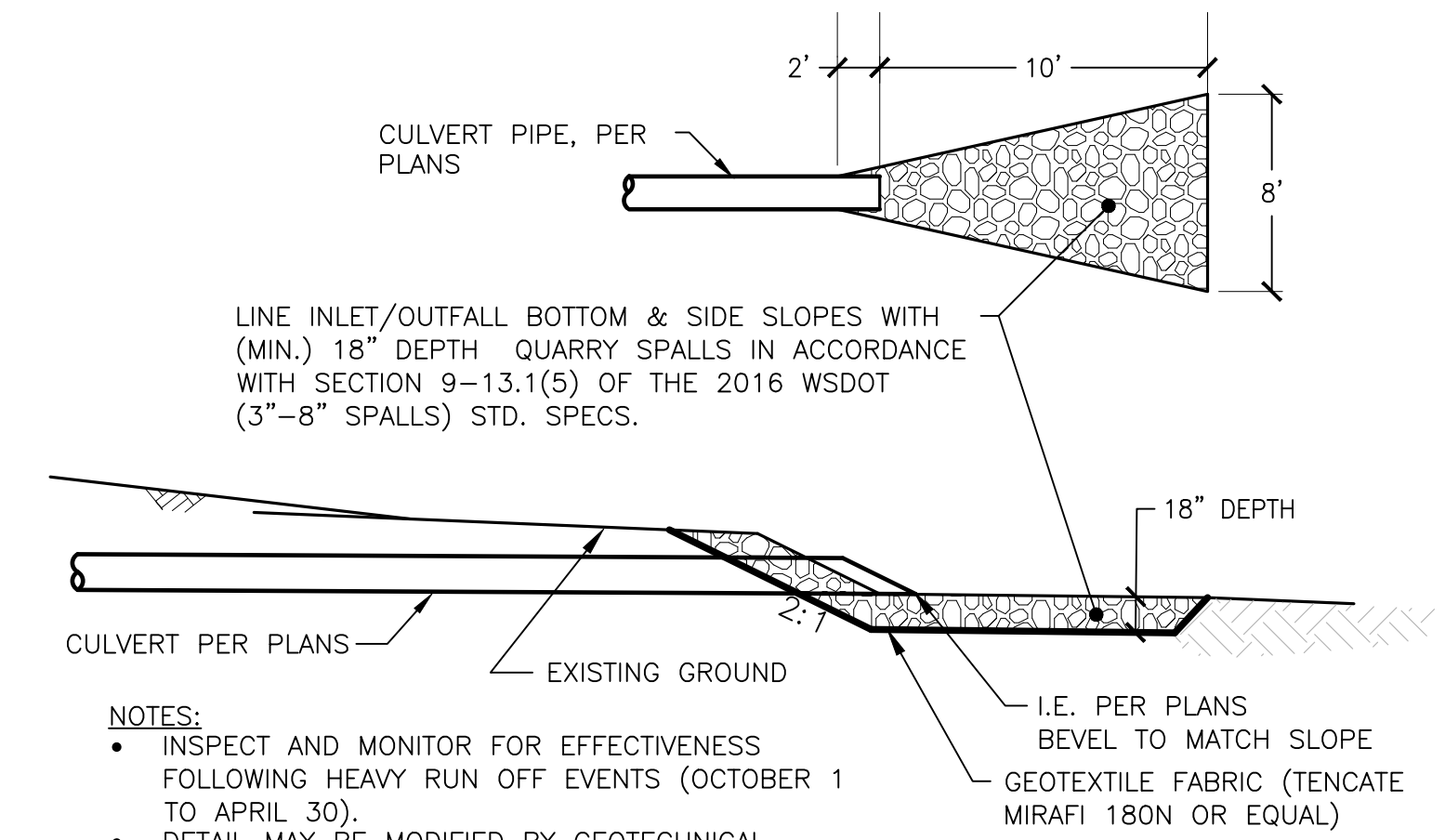


G ETHAFOAM INSTALLATION DETAIL
NOT TO SCALE



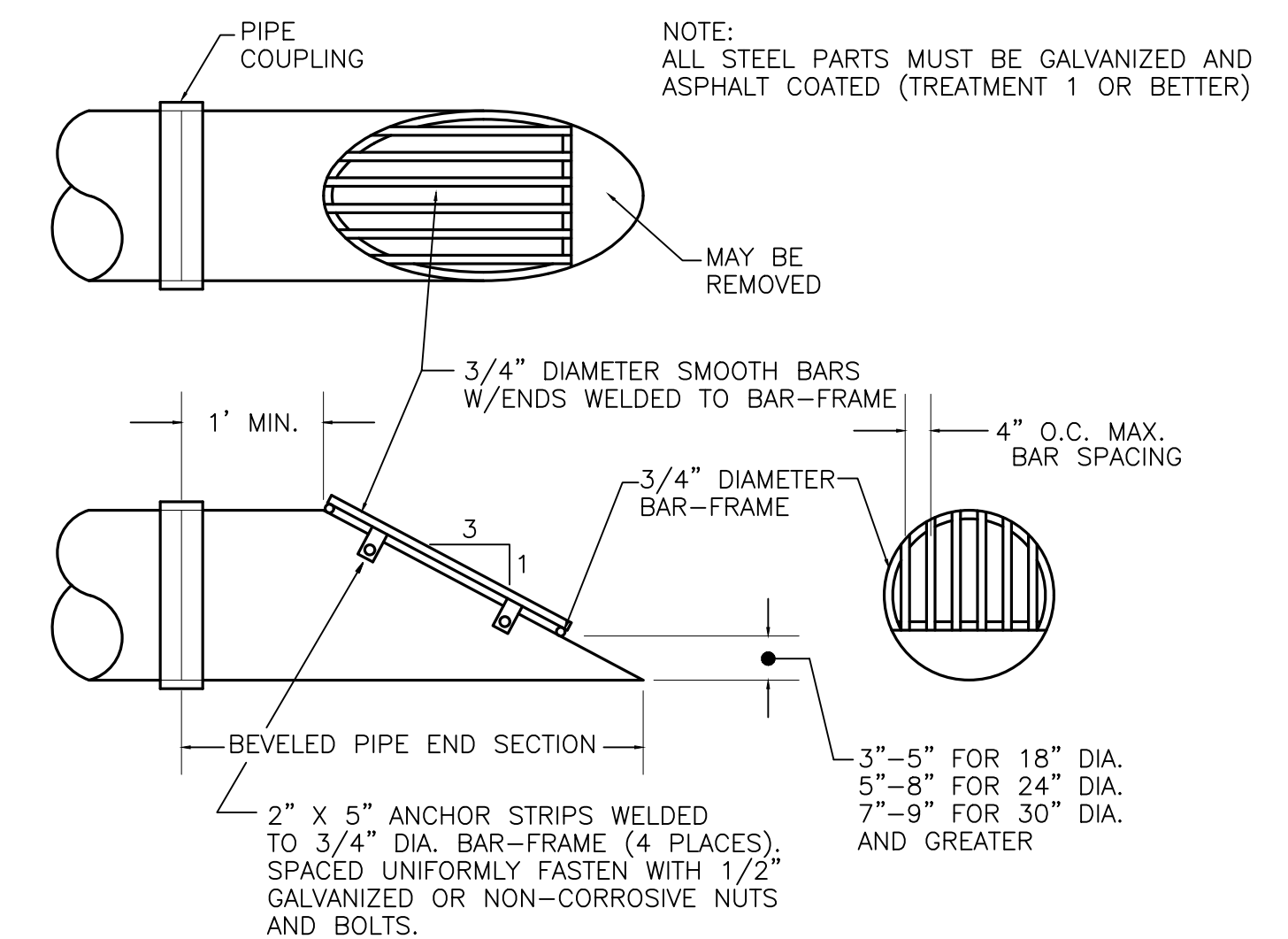
SECTION A-A

H DISPERSION TRENCH
NOT TO SCALE



D CULVERT OUTFALL DETAIL
NOT TO SCALE

- NOTES:**
1. INSPECT AND MONITOR FOR EFFECTIVENESS FOLLOWING HEAVY RUN OFF EVENTS (OCTOBER 1 TO APRIL 30).
 2. DETAIL MAY BE MODIFIED BY GEOTECHNICAL ENGINEER ON A CASE BY CASE BASIS.



E DEBRIS BARRIER
NOT TO SCALE

INLETS AND OUTLETS

1. ALL INLETS AND OUTLETS IN OR NEAR ROADWAY EMBANKMENTS MUST BE FLUSH WITH AND CONFORMING TO THE SLOPE OF THE EMBANKMENT.
2. THE EMBANKMENT AROUND THE CULVERT INLET SHALL BE PROTECTED FROM EROSION BY ROCK LINING OR RIPRAP AS SPECIFIED ON THE PLANS, EXCEPT THE LENGTH SHALL EXTEND AT LEAST 5 FEET UPSTREAM OF THE CULVERT, AND THE HEIGHT SHALL BE MINIMUM 1 FOOT ABOVE THE CROWN FOR PIPES 18 INCHES DIAMETER OR LESS, AND MINIMUM 2 FEET ABOVE THE CROWN FOR PIPES GREATER THAN 18 INCHES DIAMETER.

- NOTES:**
1. WHEN TWO CB'S ARE SHOWN IN THE SAME DISPERSION TRENCH, THEY SHALL BE CONNECTED BY A 12" PERFORATED PIPE.
 2. THIS TRENCH SHALL BE CONSTRUCTED SO AS TO PREVENT POINT DISCHARGE AND/OR EROSION.
 3. TRENCHES MAY BE PLACED NO CLOSER THAN 50 FEET TO ONE ANOTHER. (100 FEET ALONG FLOWLINE)
 4. TRENCH AND GRADE BOARD MUST BE LEVEL. ALIGN TO FOLLOW CONTOURS OF SITE.
 5. SUPPORT POST SPACING AS REQUIRED BY SOIL CONDITIONS TO ENSURE GRADE BOARD REMAINS LEVEL.

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____ DATE _____

REVISIONS		
NO.	DESCRIPTION/DATE	BY

LAUR G. BARTENKAMP
 STATE OF WASHINGTON
 40111
 REGISTERED PROFESSIONAL ENGINEER
 04/16/2021

CONSULTING ENGINEERS LLC
 505
 FEDERAL WAY, WA 98003
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 (253) 297-9900
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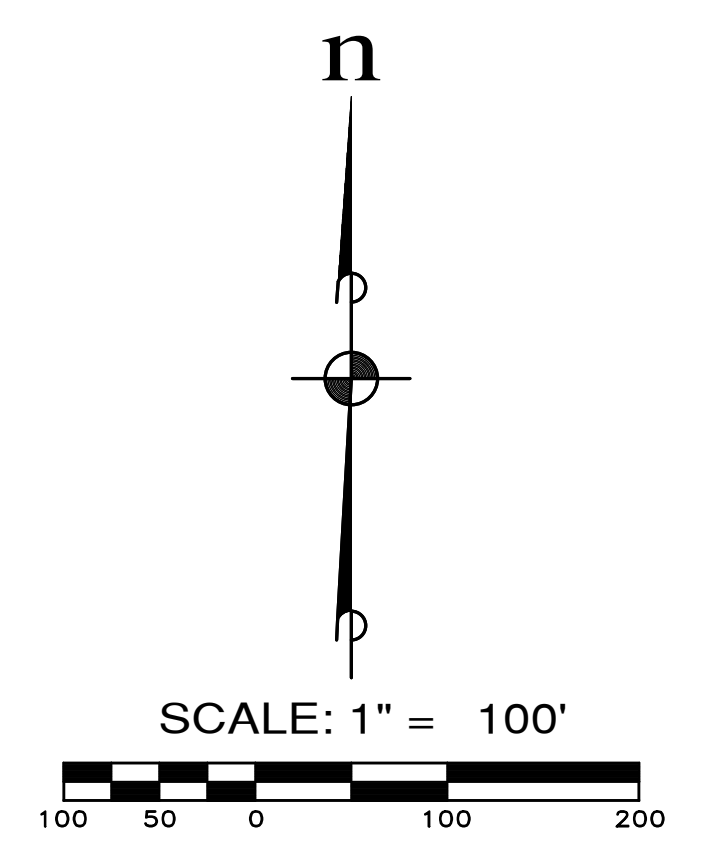
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NEW SUNCADIA, LLC
 NELSON RIDGE
 ROAD/STORM DETAILS & NOTES
 WASHINGTON
 KITTITAS COUNTY

JOB NO.: 998-812-020
 DWG. NAME: DT-04
 DESIGNED BY: LGB
 DRAWN BY: JHJ
 CHECKED BY:
 DATE: 04/16/2021
 DATE OF PRINT:

DT-04
 5 OF 29 SHEETS

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 FEDERAL WAY, WA 98003

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Civil Engineering
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FEDERAL WAY
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 (253) 297-9900

Land Planning
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NEW SUNCADIA, LLC

NELSON RIDGE

ROAD/STORM KEY MAP

WASHINGTON

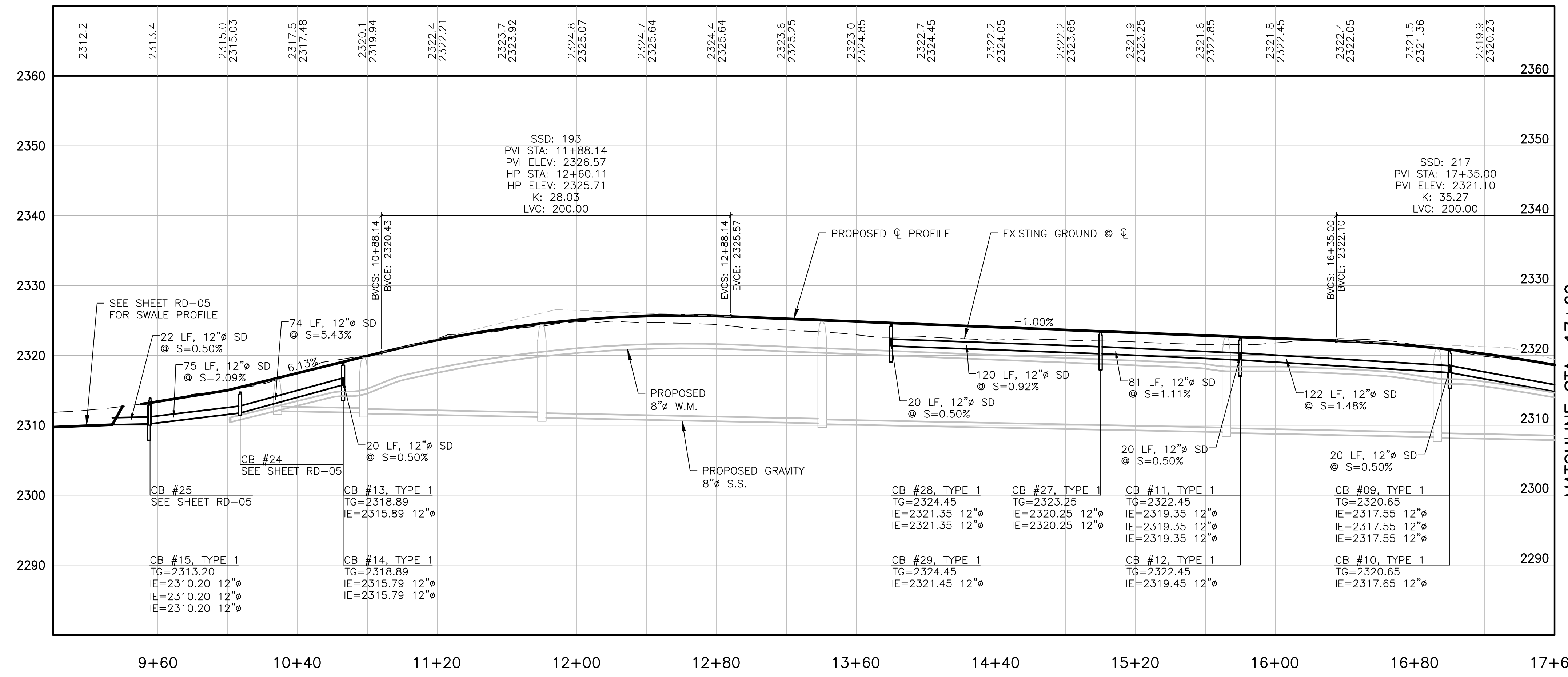
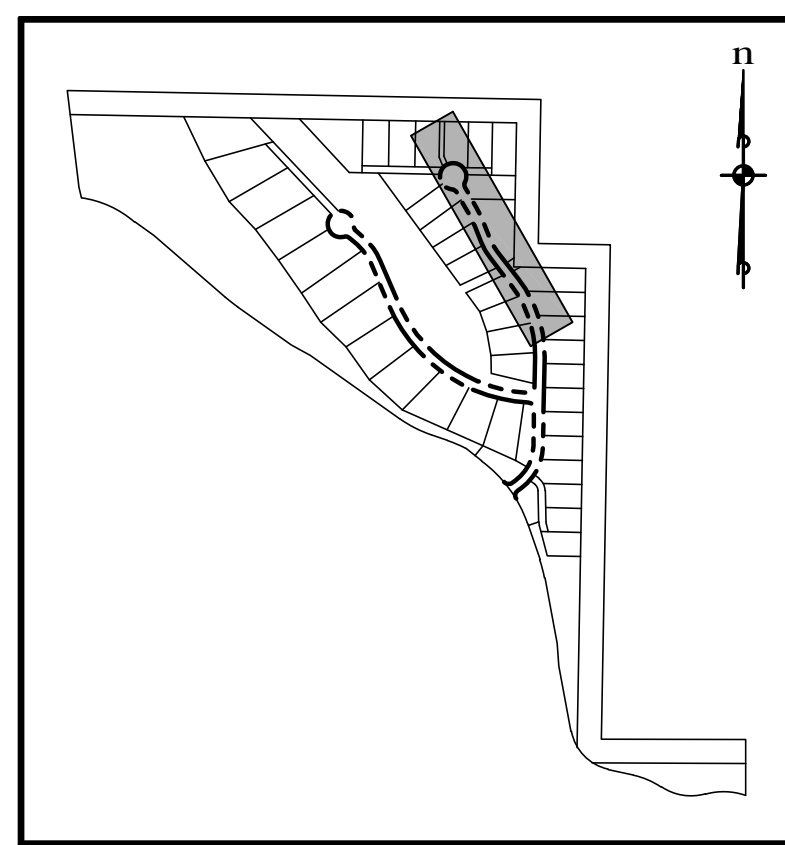
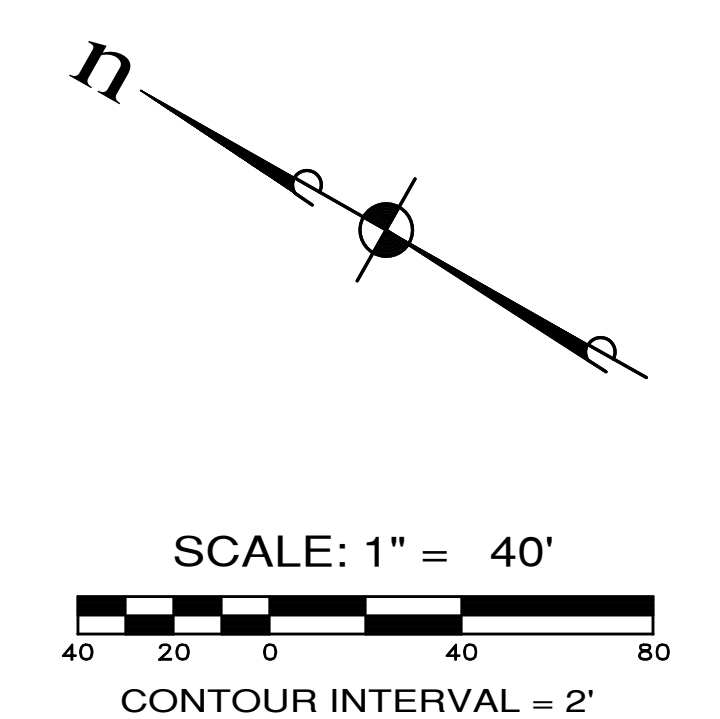
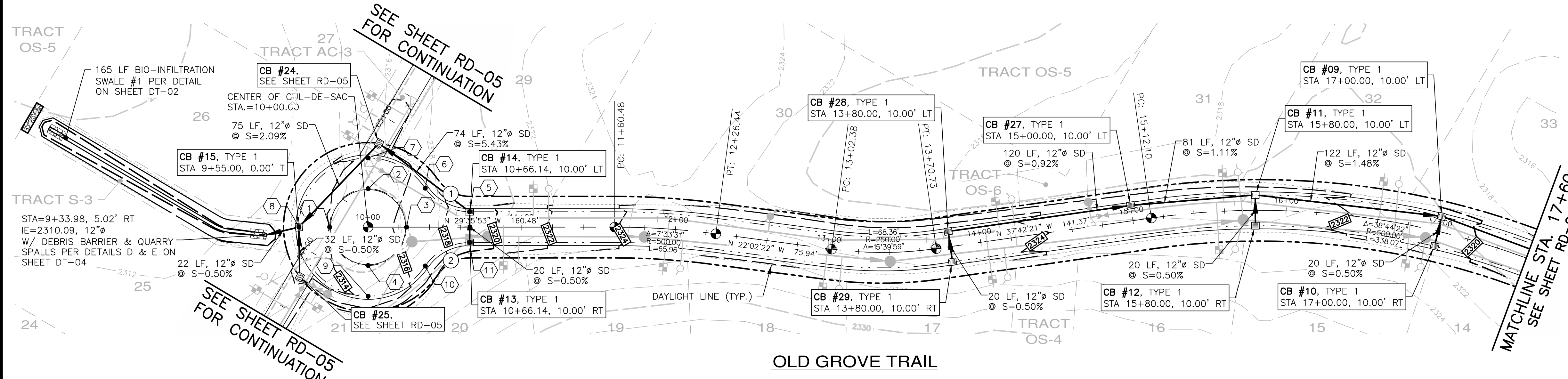
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RD-KEY

6 OF 29 SHEETS

A PORTION OF SECTION 13, T. 20 N., R. 14 E., AND SECTION 18, T. 20 N., R. 15 E., W.M., KITTITAS COUNTY, WASHINGTON



KEY MAP

CUL-DE-SAC TABLE

1	N:693150.45 E:1509109.31 EL.=2314.19	7	N:693150.43 E:1509150.90 EL.=2314.13
2	N:693140.55 E:1509133.51 EL.=2314.53	8	N:693167.33 E:1509089.55 EL.=2313.20
3	N:693106.46 E:1509124.12 EL.=2316.56	9	N:693105.97 E:1509072.65 EL.=2314.13
4	N:693115.85 E:1509090.04 EL.=2314.53	10	N:693083.35 E:1509108.14 EL.=2316.80
5	N:693075.63 E:1509153.14 EL.=2318.89	11	N:693065.75 E:1509135.75 EL.=2318.89
6	N:693108.35 E:1509152.16 EL.=2316.80		

CURB TABLE

STATION	OFFSET	ELEV.
10+37.21	25.31' LT	2316.80
1/4 Δ	-----	2317.33
1/2 Δ	-----	2317.85
3/4 Δ	-----	2318.37
ECR	10+66.14 10.00' RT	2318.89
Δ=55°46'16" R=35.00' L=34.07'		

STATION	OFFSET	ELEV.
10+37.21	25.31' RT	2316.80
1/4 Δ	-----	2317.33
1/2 Δ	-----	2317.85
3/4 Δ	-----	2318.37
ECR	10+66.14 10.00' RT	2318.89
Δ=55°46'16" R=35.00' L=34.07'		

SCALE: 1"=40' HORIZ.
1"=10' VERT.



APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____ DATE _____

REVISIONS		
NO.	DESCRIPTION/DATE	BY

05/13/2021

ESM CONSULTING ENGINEERS, LLC
 5000 Federal Way, WA 98003
 (206) 838-6113
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REGISTERED PROFESSIONAL ENGINEER
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 FEDERAL WAY, WA 98003

Land Planning
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 Public Works

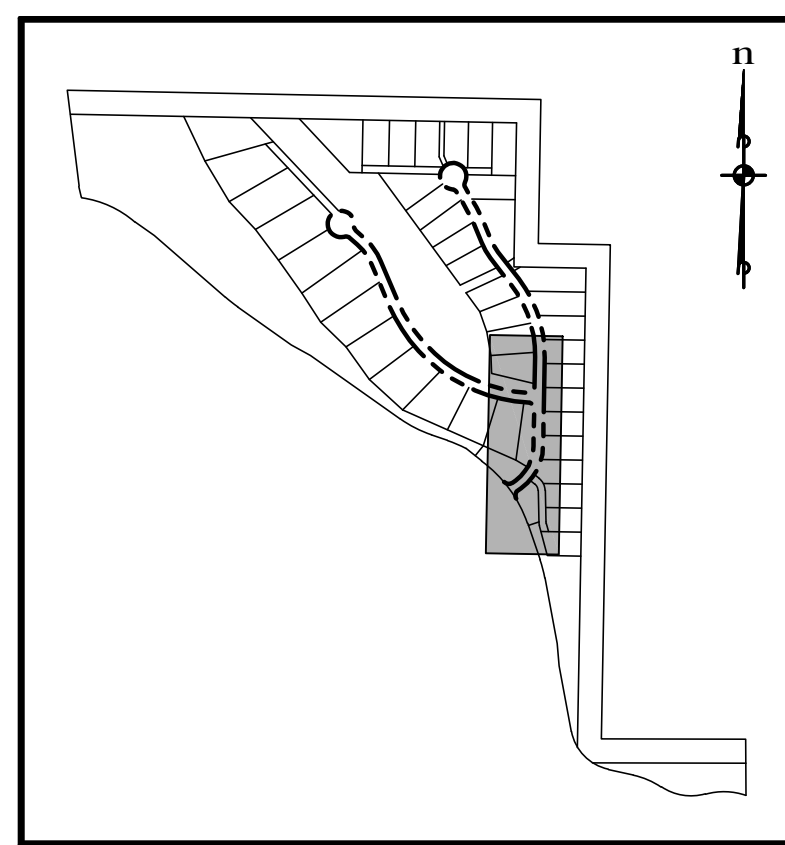
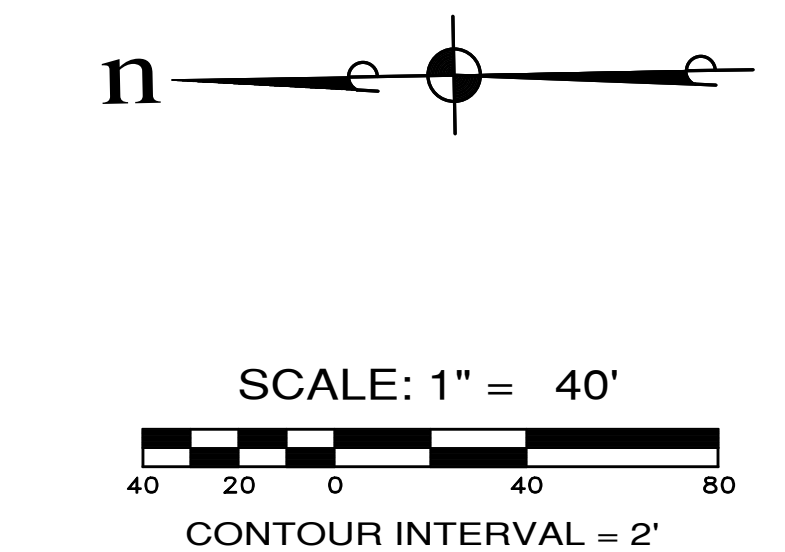
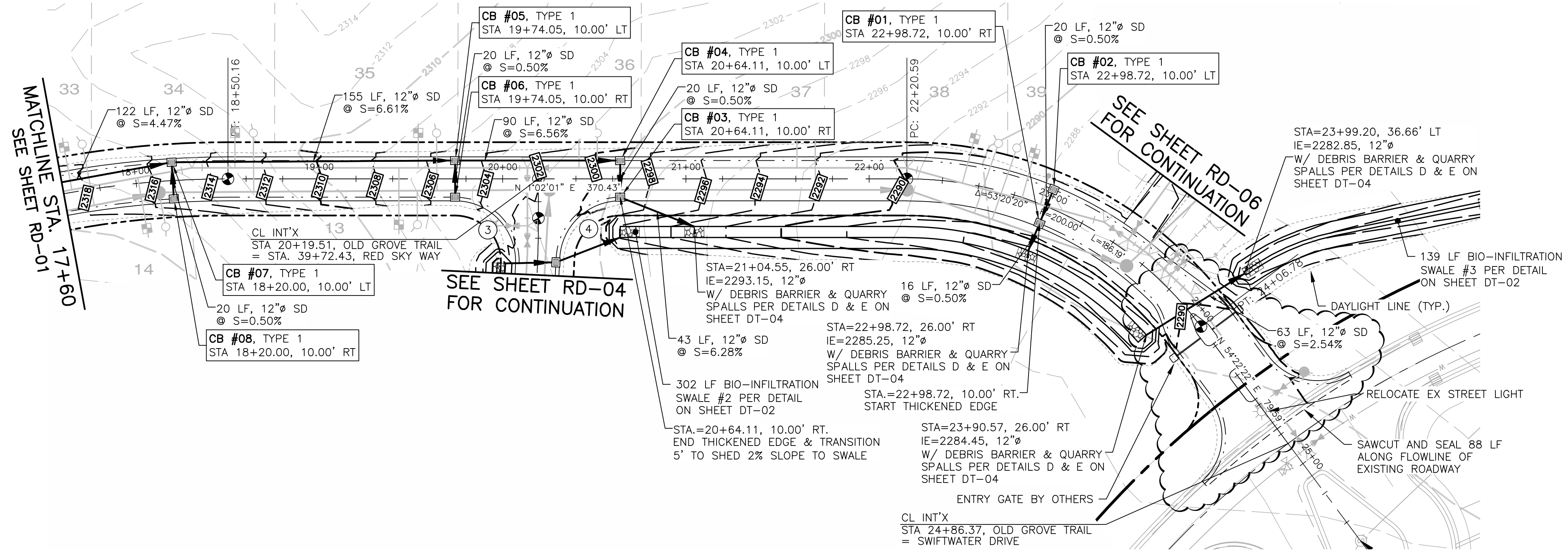
WASHINGTON
 KITTITAS COUNTY

NEW SUNCADIA, LLC
NELSON RIDGE
 ROAD/STORM PLAN & PROFILE

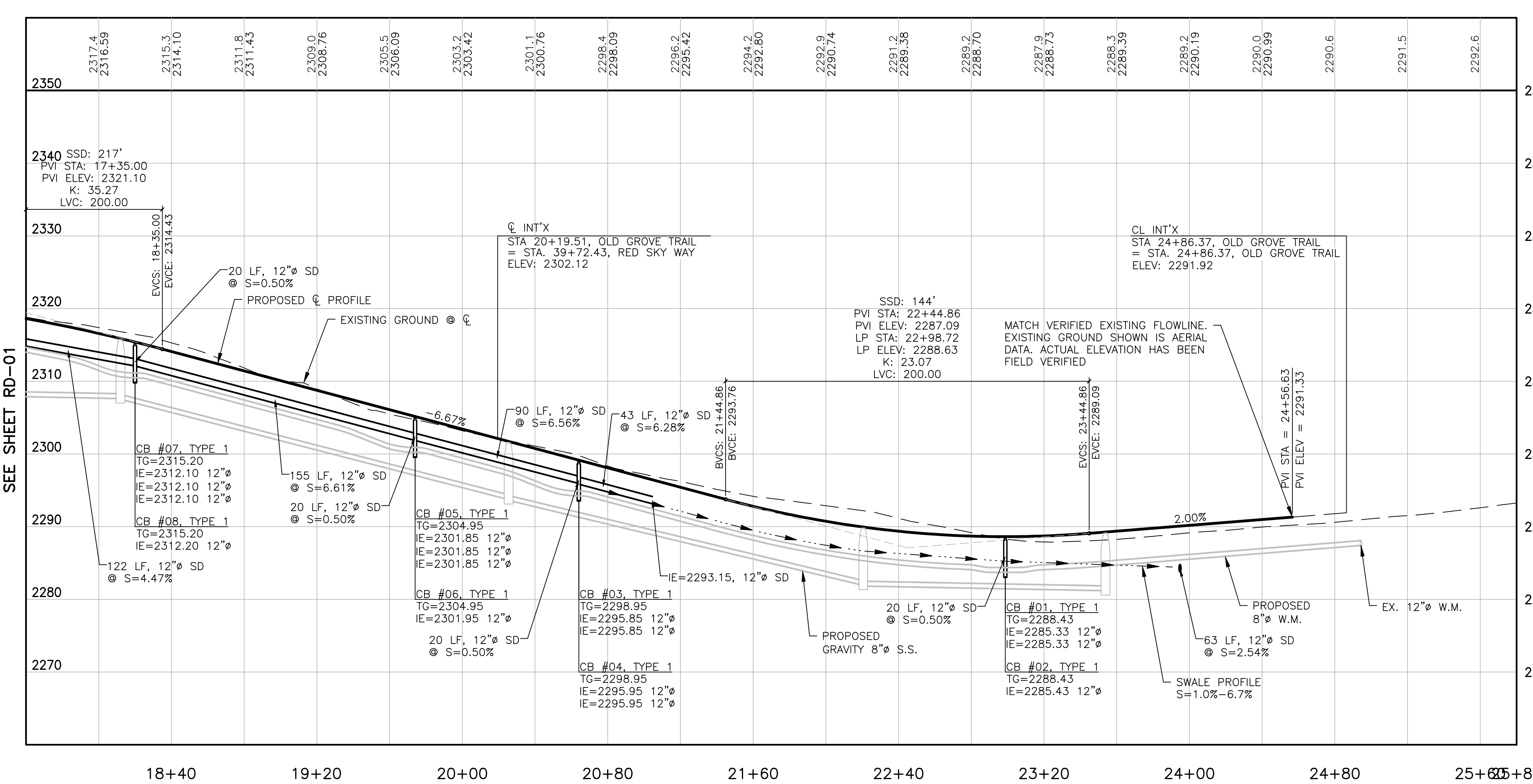
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 DRAWN BY: JH
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 DATE OF PRINT:
RD-01
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OLD GROVE TRAIL



KEY MAP

3 CURB TABLE

STATION	OFFSET	ELEV.
19+74.05	12.00' RT	2305.11
---	---	2304.18
---	---	2303.25
---	---	2302.32
39+25.67	12.00' LT	2301.19
Δ=92°13'56" R=33.00' L=53.12'		

4 CURB TABLE

STATION	OFFSET	ELEV.
38+28.95	12.00' RT	2301.25
---	---	2300.72
---	---	2300.18
---	---	2299.64
20+64.11	12.00' RT	2298.91
Δ=88°03'25" R=33.00' RJ=50.72'		

SCALE: 1"=40' HORIZ.
1"=10' VERT.



Know what's below.
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REGISTERED PROFESSIONAL ENGINEER
40111
STATE OF WASHINGTON

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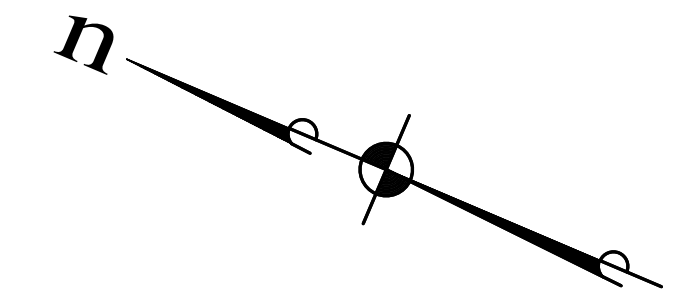
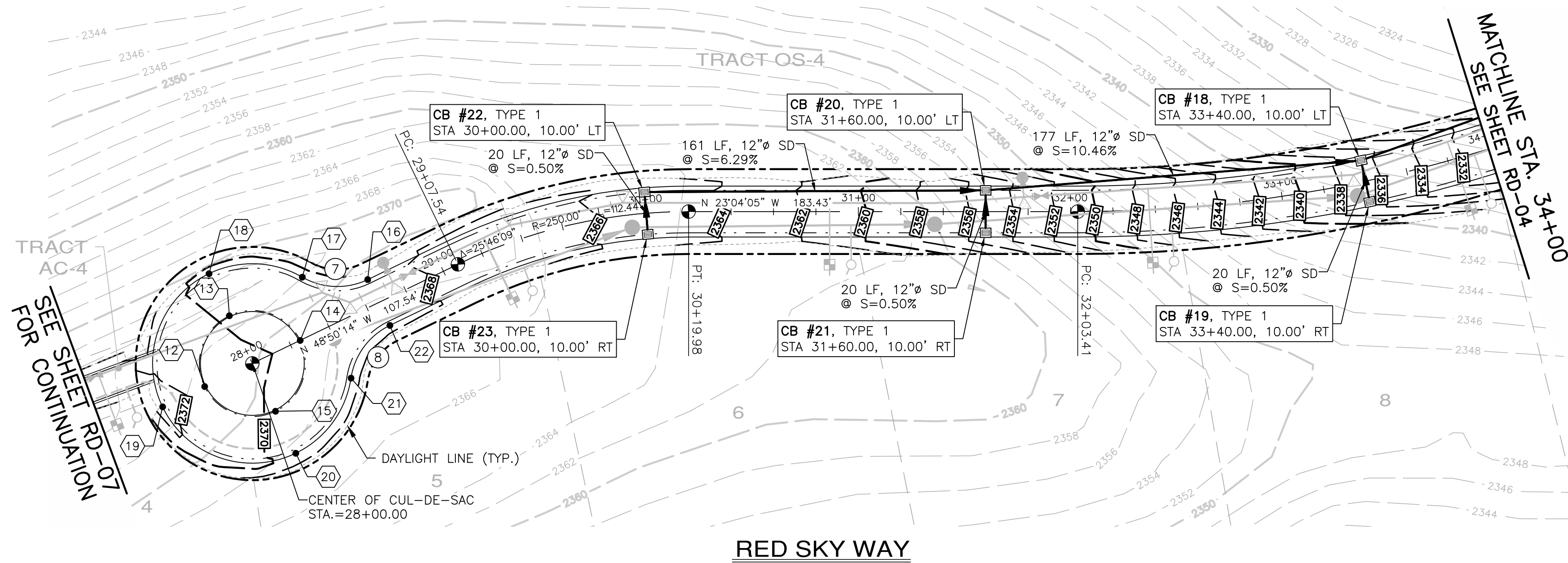
KITTITAS COUNTY

NEW SUNCADIA, LLC
NELSON RIDGE
ROAD/STORM PLAN & PROFILE

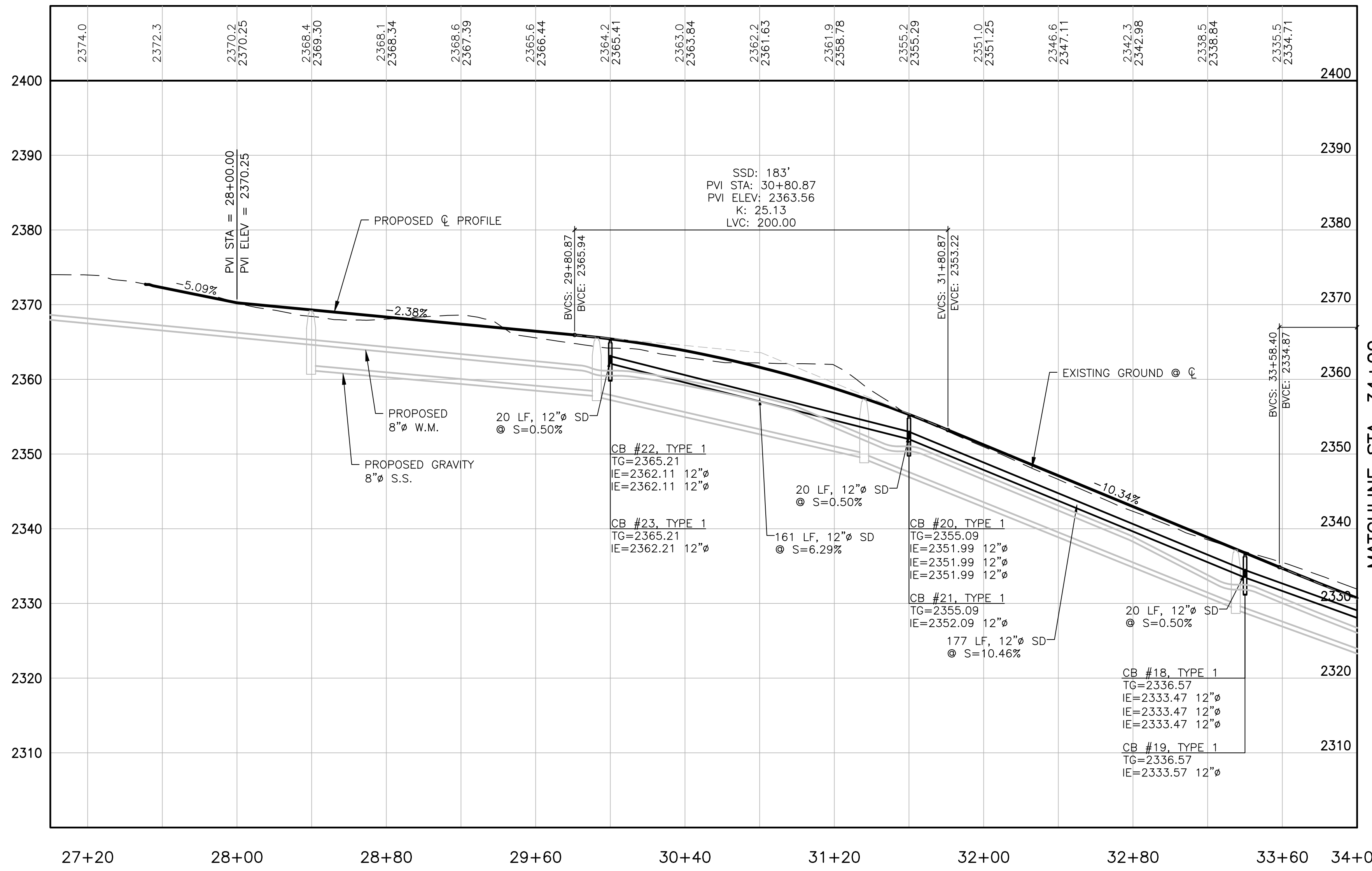
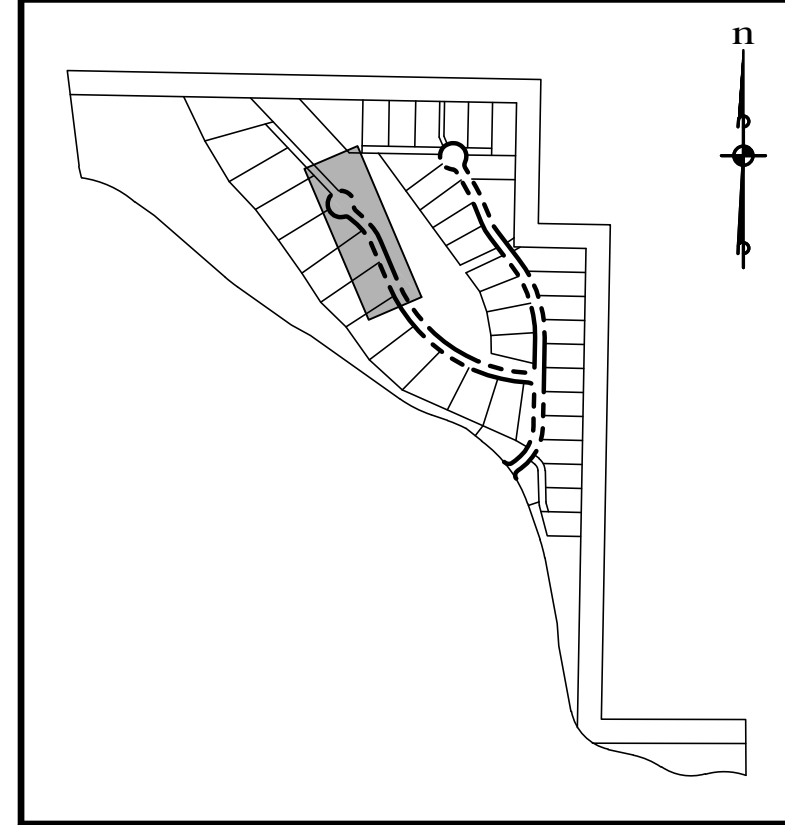
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SCALE: 1" = 40'
CONTOUR INTERVAL = 2'



MATCHLINE STA. 34+00
SEE SHEET RD-04

SCALE: 1"=40' HORIZ.
1"=10' VERT.

KEY MAP

CUL-DE-SAC TABLE

12	N:692945.71 E:1508625.08 EL.=2371.52	18	N:692964.64 E:1508674.83 EL.=2369.51
13	N:692948.08 E:1508660.35 EL.=2369.75	19	N:692960.19 E:1508608.51 EL.=2372.70
14	N:692912.80 E:1508662.72 EL.=2369.65	20	N:692893.87 E:1508612.96 EL.=2369.51
15	N:692910.44 E:1508627.44 EL.=2369.75	21	N:692883.78 E:1508655.75 EL.=2369.02
16	N:692893.25 E:1508700.28 EL.=2368.47	22	N:692876.69 E:1508685.79 EL.=2368.63
17	N:692923.82 E:1508688.57 EL.=2368.86		

7 CURB TABLE

STATION	OFFSET	ELEV.
BCR 28+38.86	26.44' LT	2369.02
1/4 Δ	-----	2368.92
1/2 Δ	-----	2368.83
3/4 Δ	-----	2368.73
ECR 28+66.14	12.00' LT	2368.63
Δ=55°46'18" R=33.00' L=32.12'		

8 CURB TABLE

STATION	OFFSET	ELEV.
BCR 28+38.86	26.44' RT	2369.02
1/4 Δ	-----	2368.92
1/2 Δ	-----	2368.83
3/4 Δ	-----	2368.73
ECR 28+66.14	12.00' RT	2368.63
Δ=55°46'18" R=33.00' L=32.12'		



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KITTITAS COUNTY ENGINEER _____ DATE _____

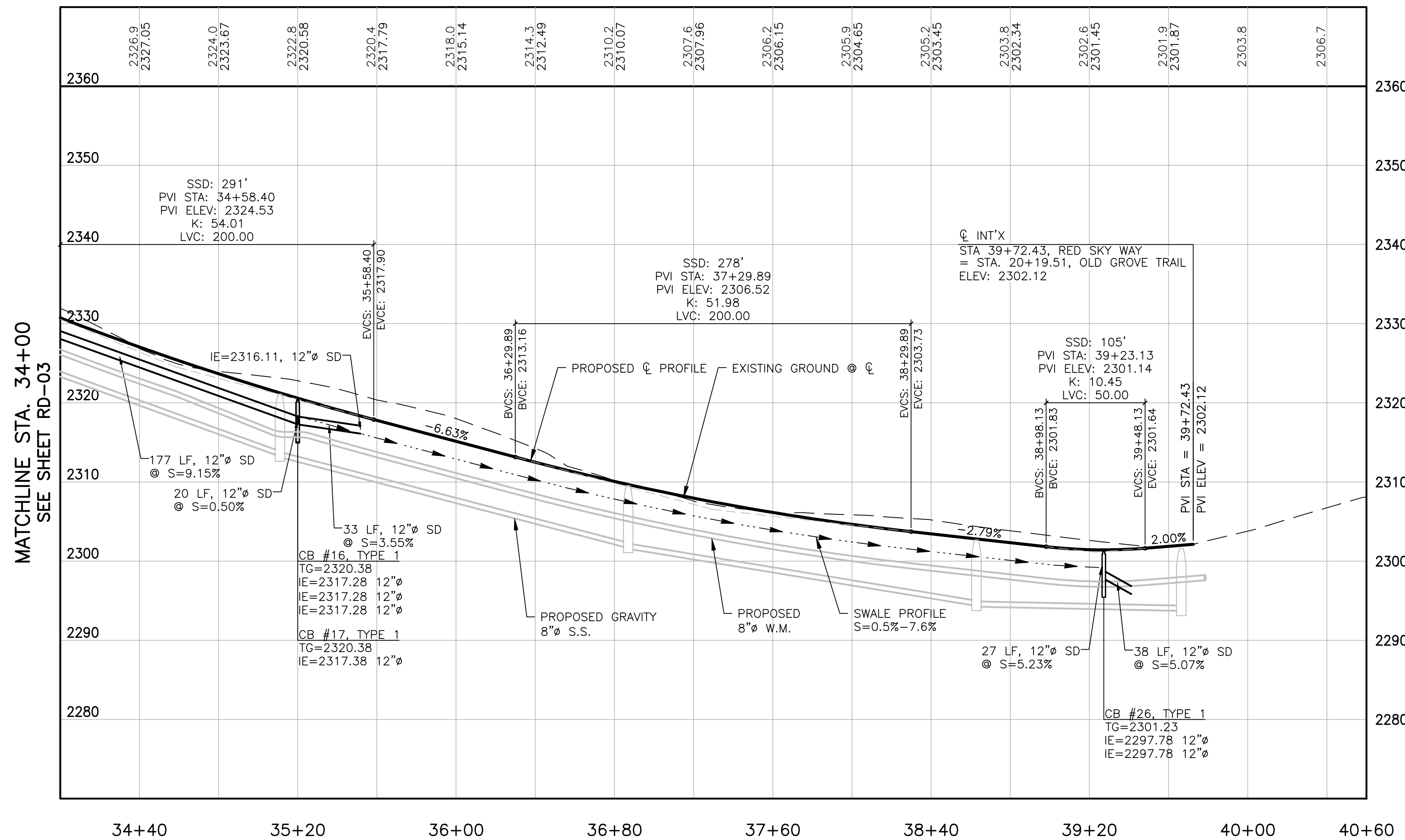
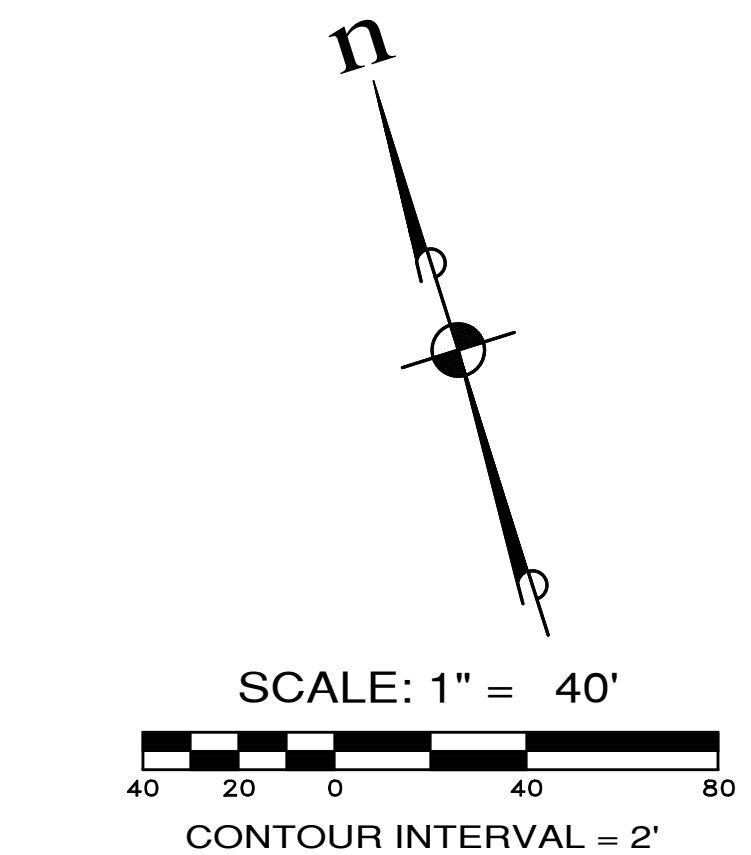
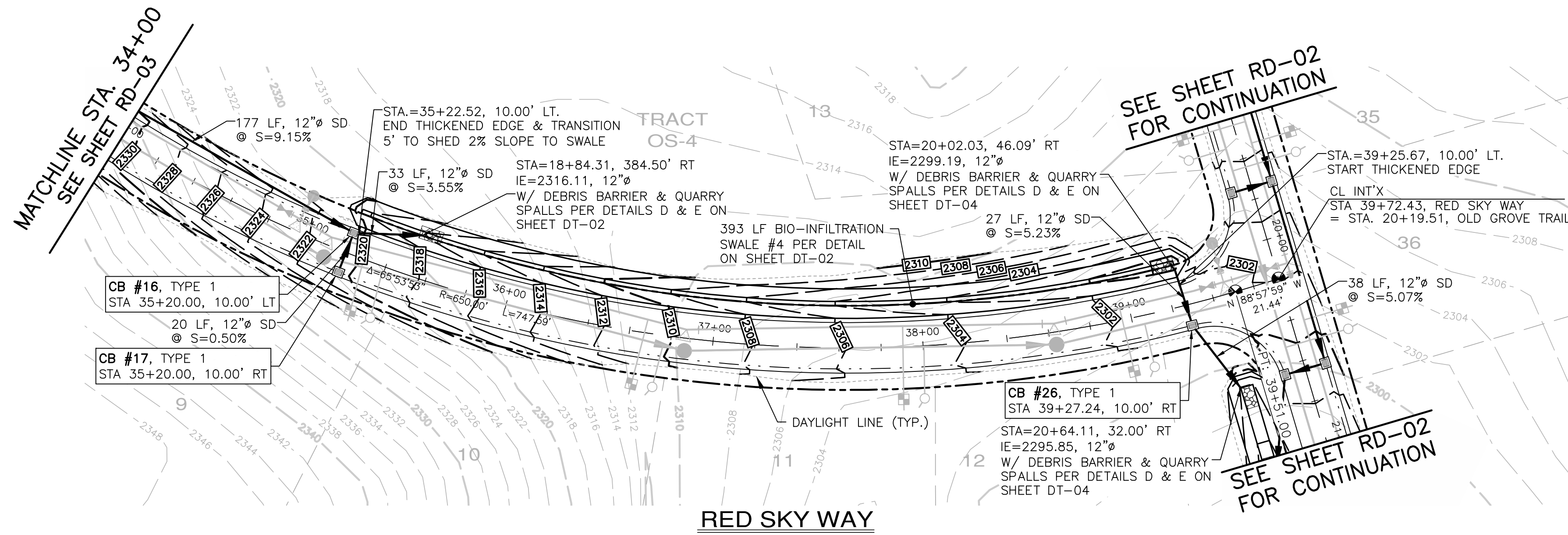
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SCALE: 1"=40' HORIZ.
1"=10' VERT.



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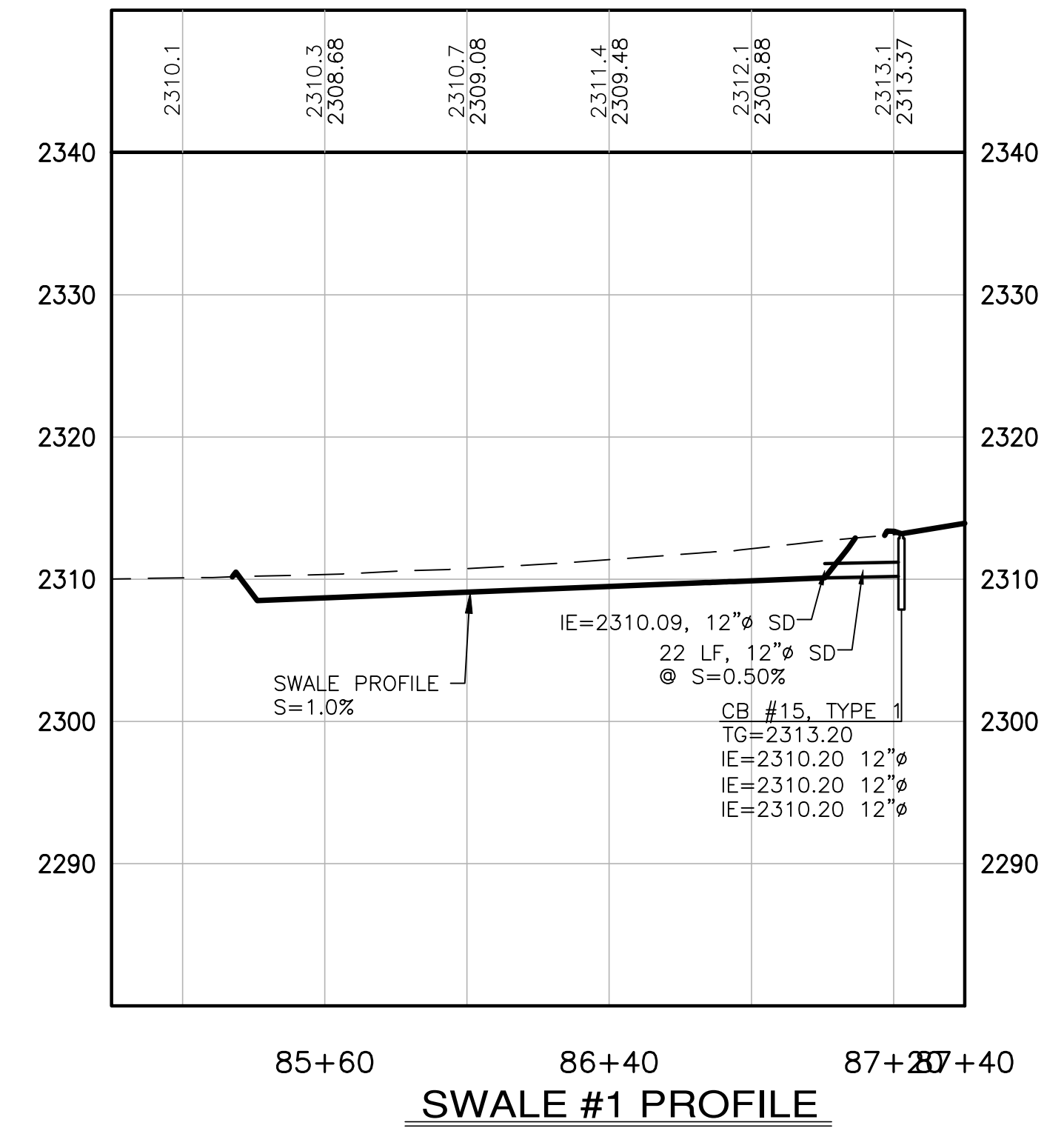
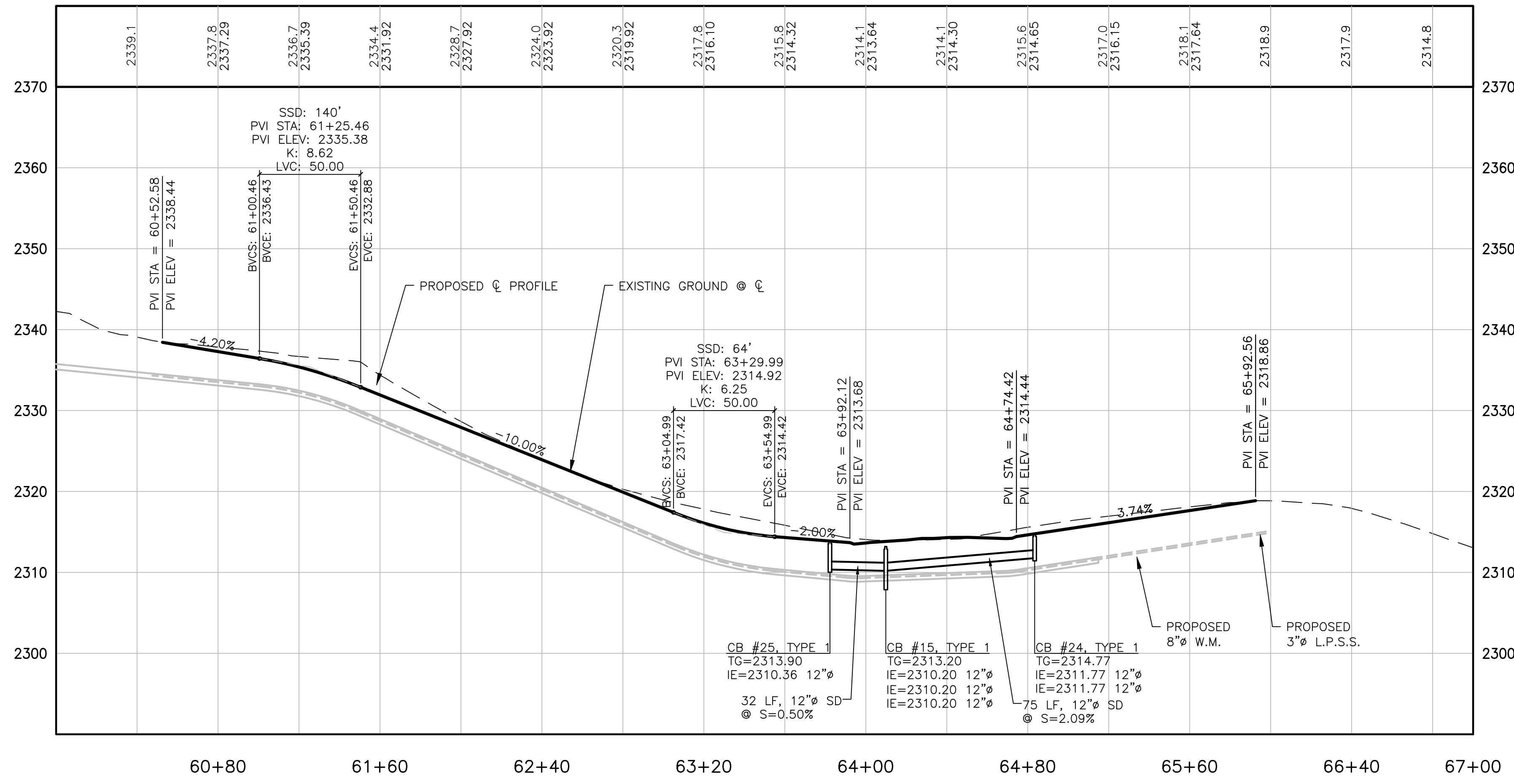
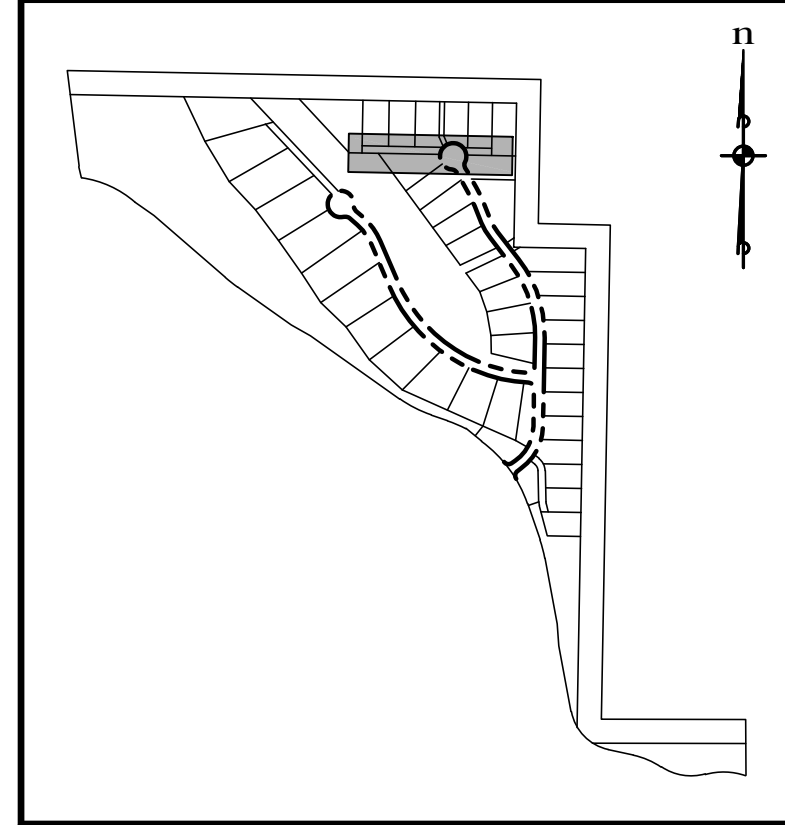
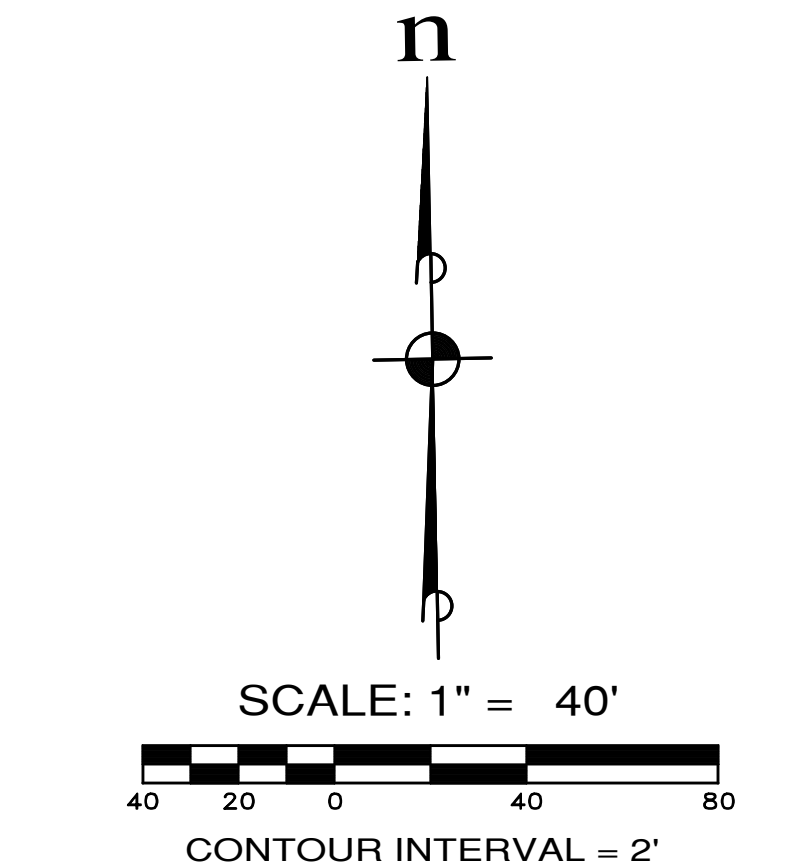
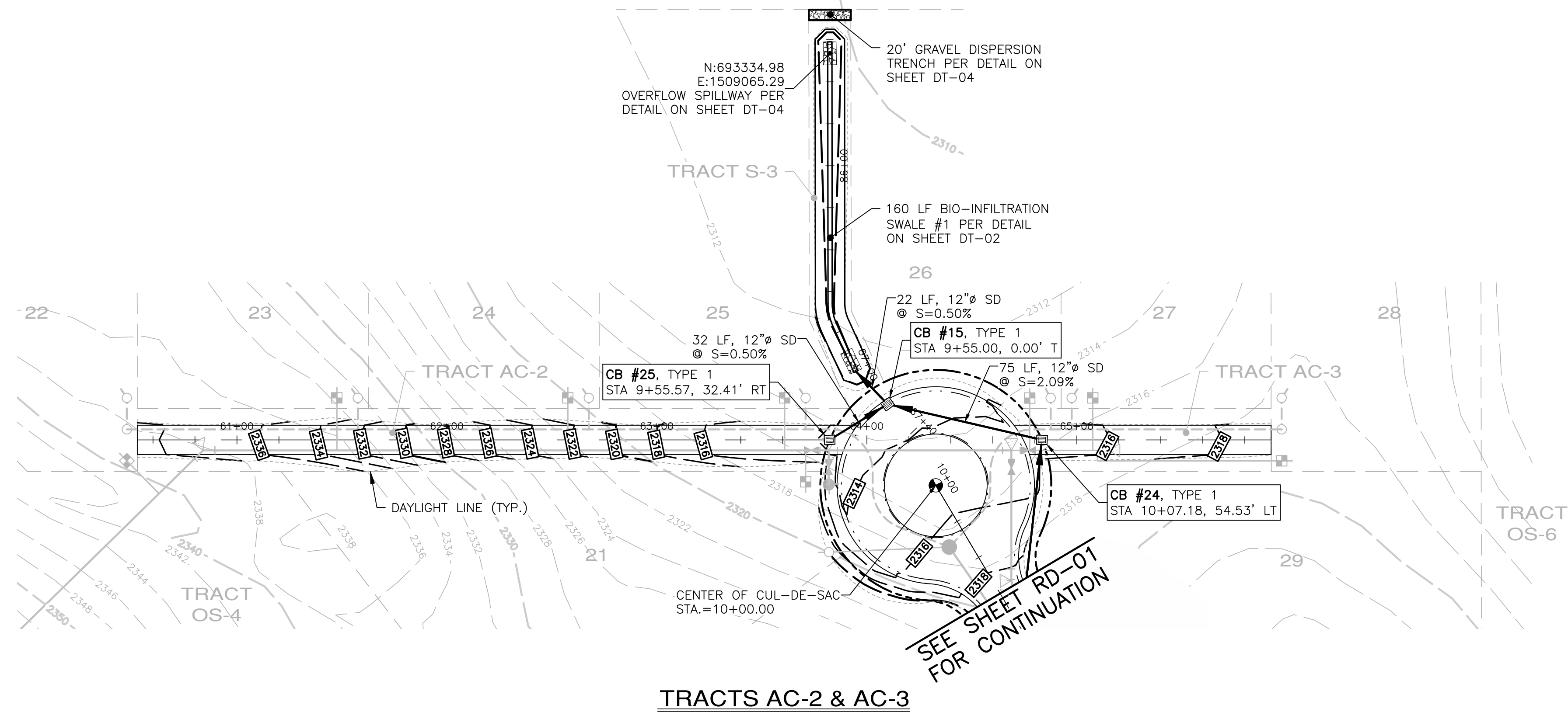
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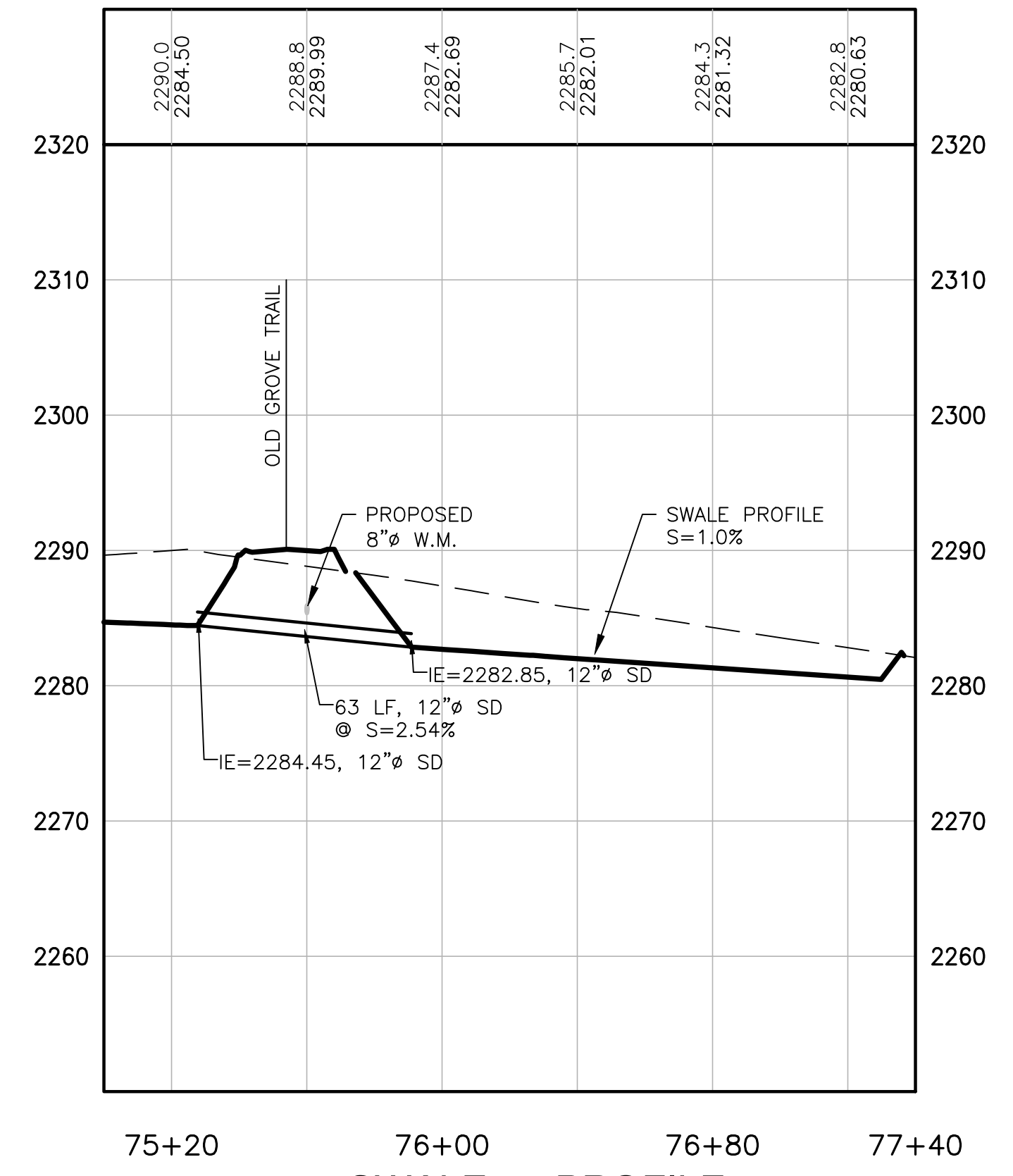
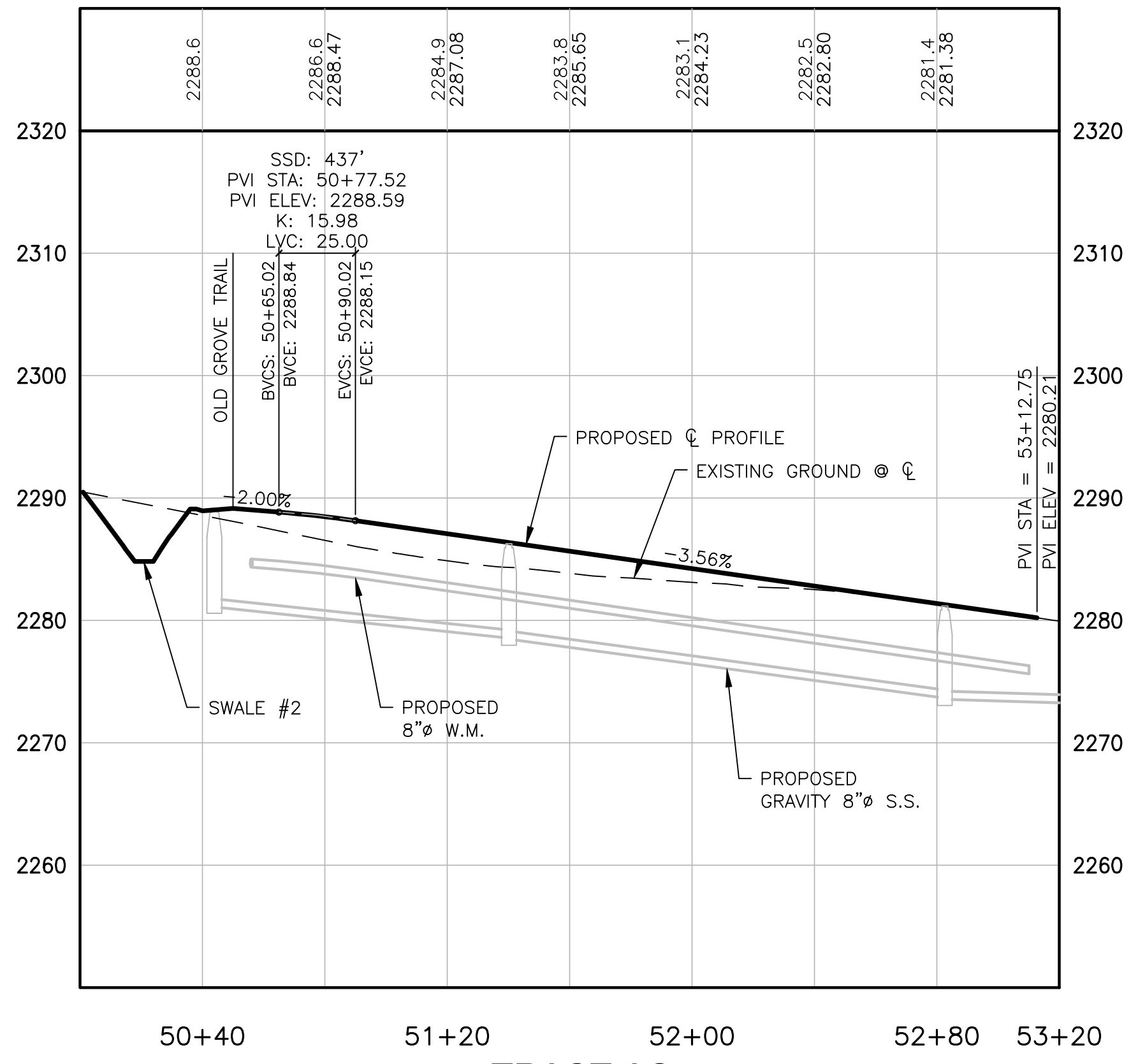
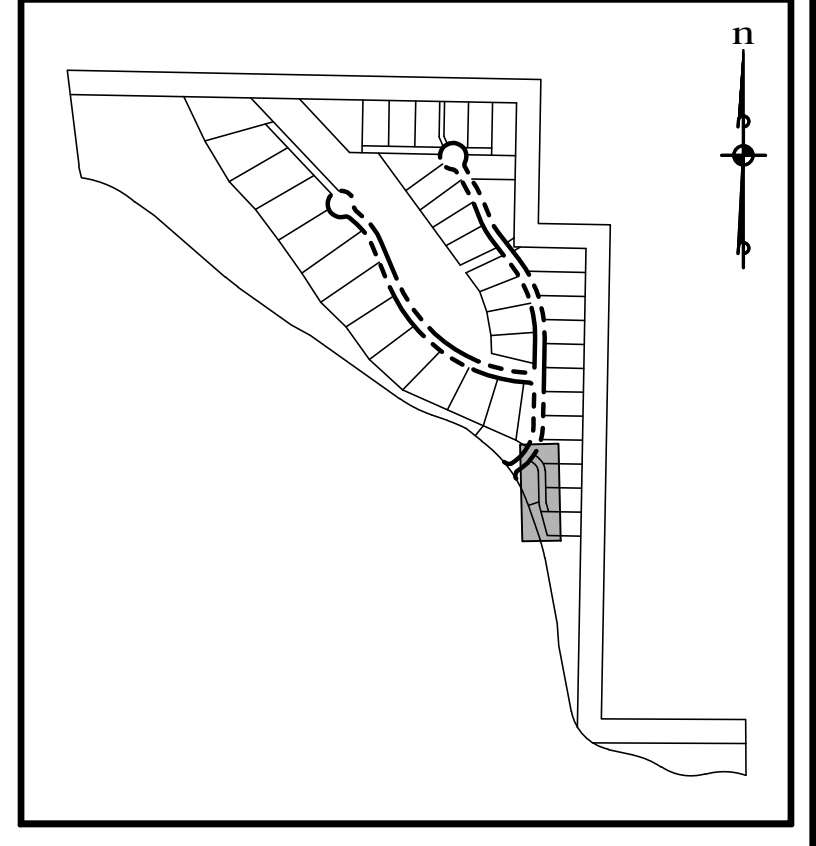
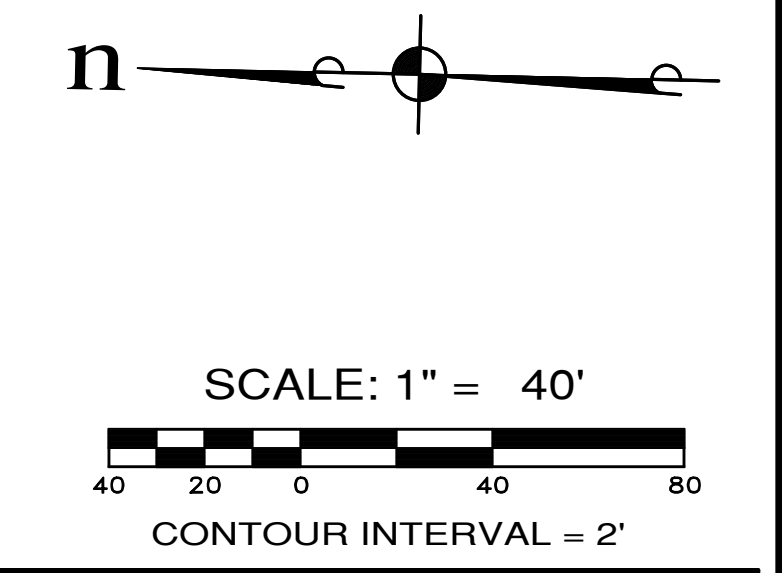
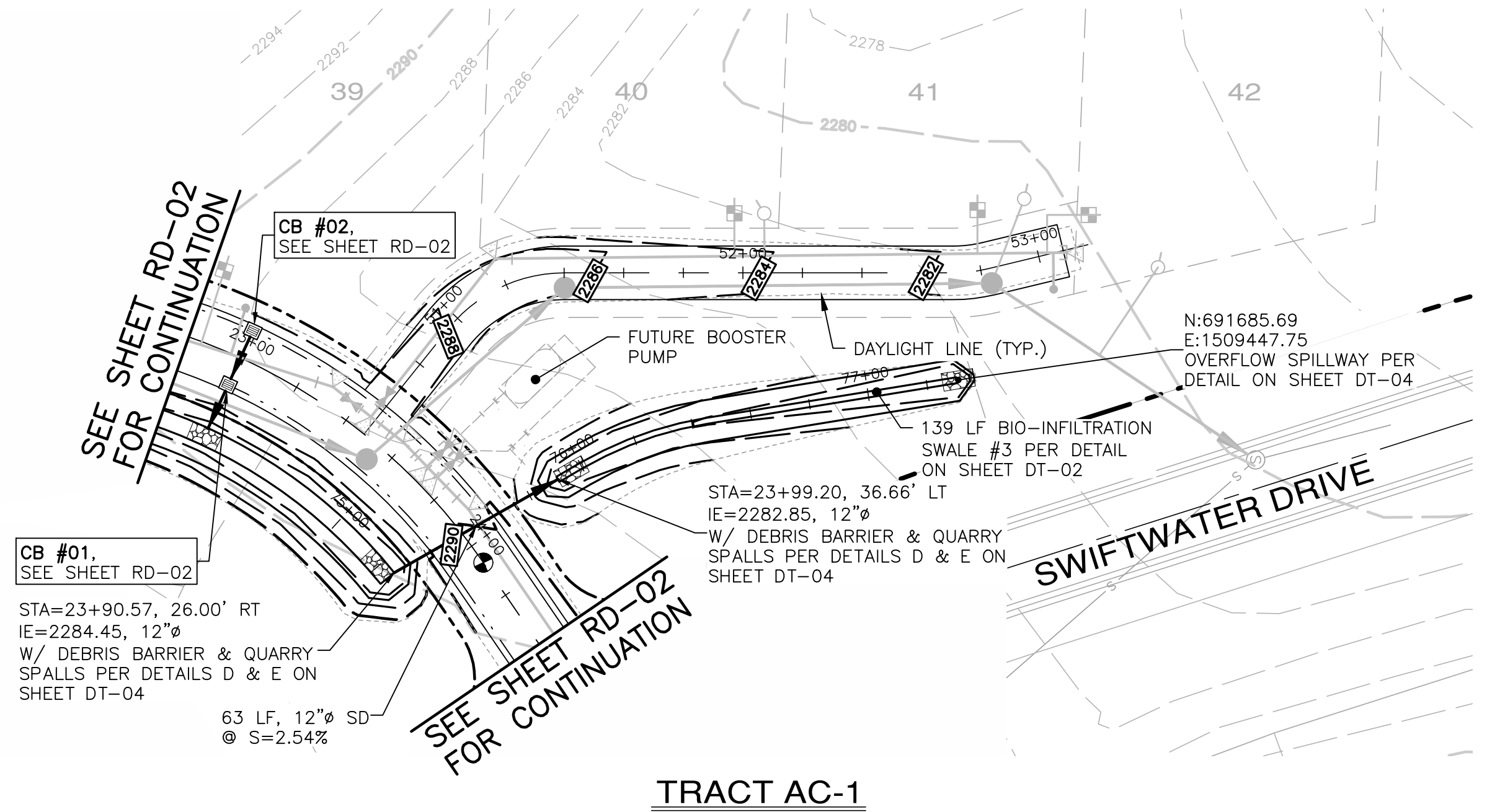
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TRACT AC-1
SCALE: 1"=40' HORIZ.
1"=10' VERT.

SWALE #3 PROFILE
SCALE: 1"=40' HORIZ.
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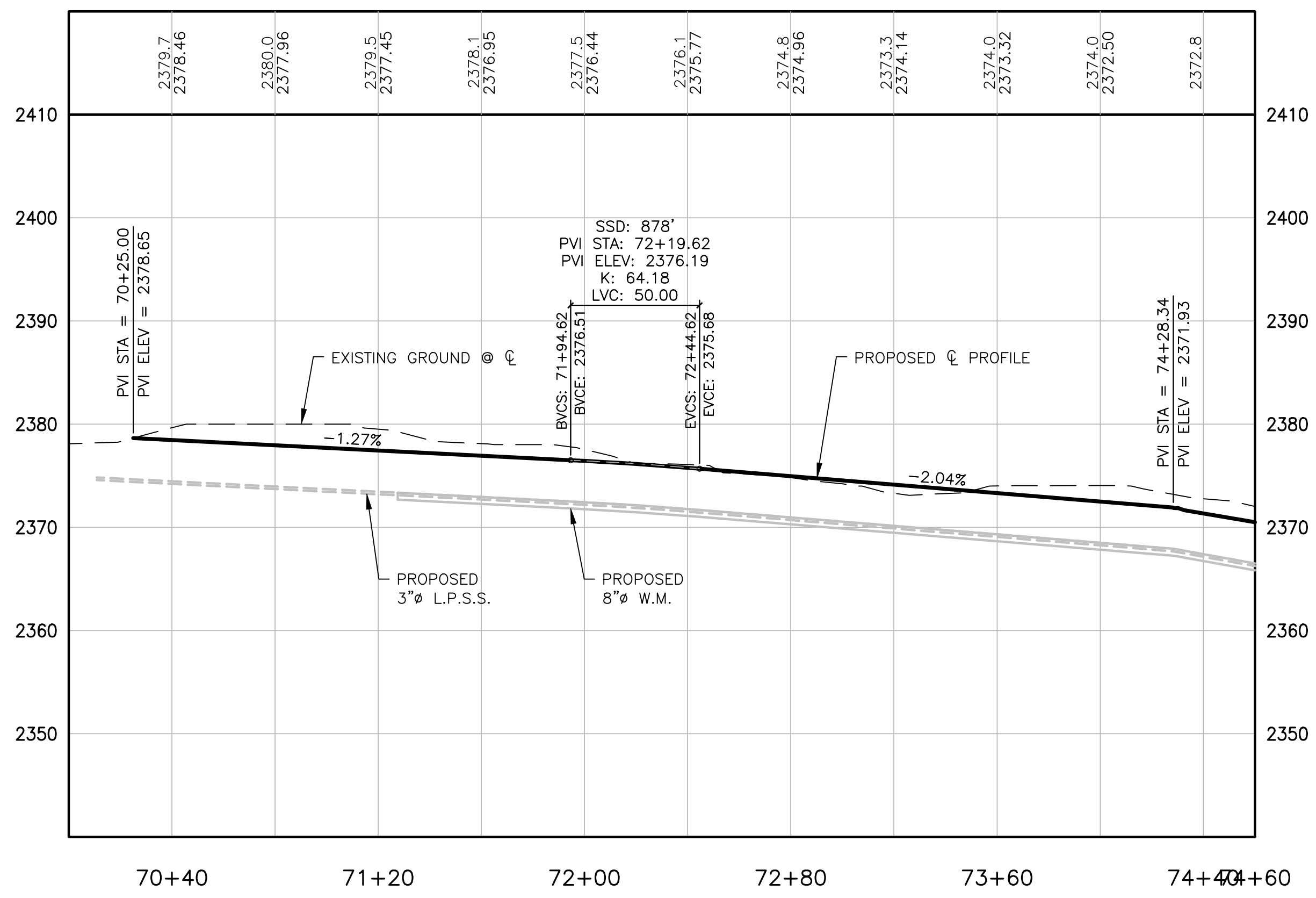
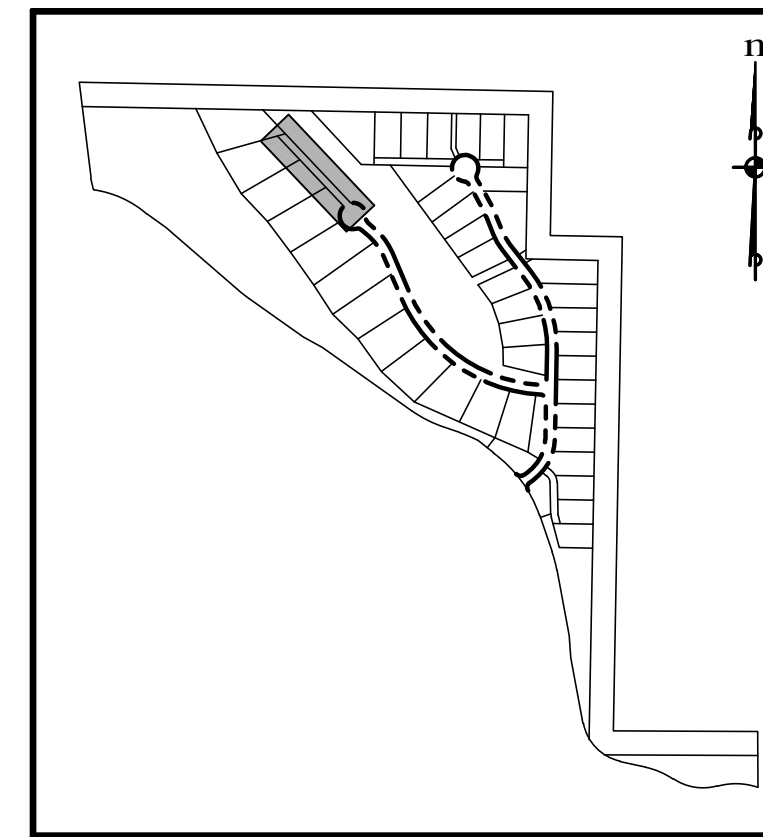
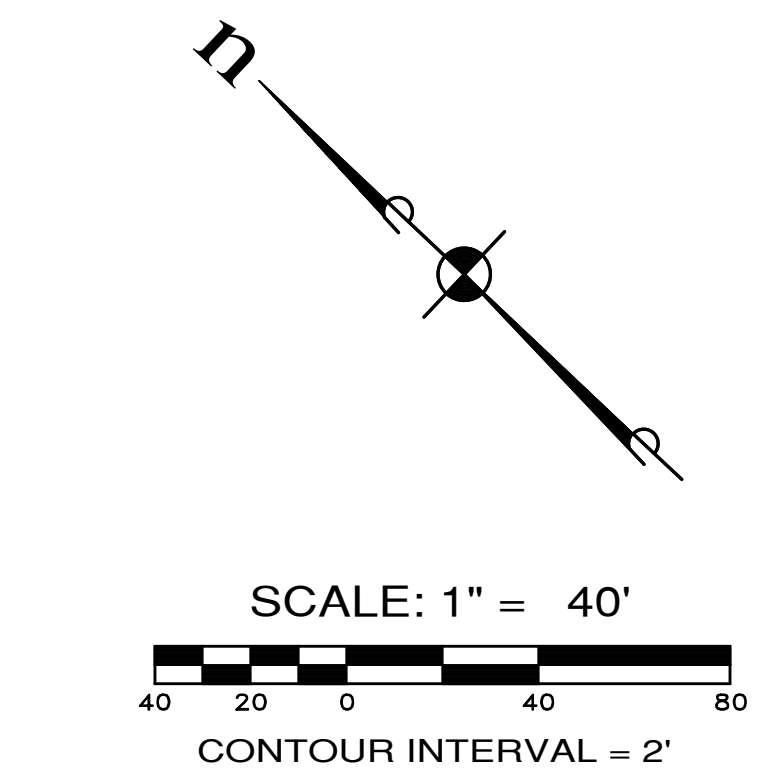
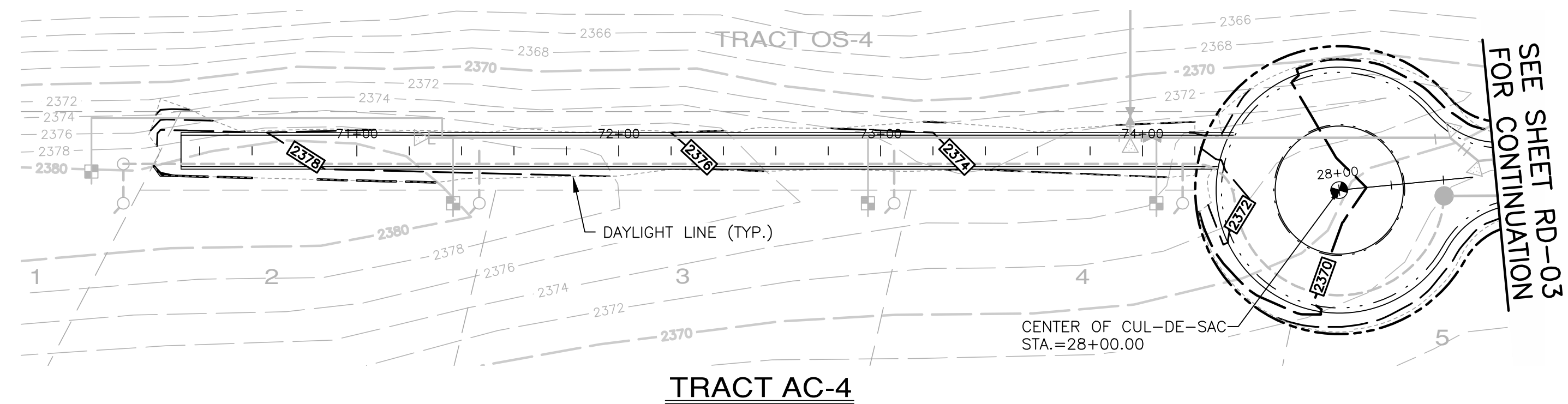


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DATE OF PRINT:	

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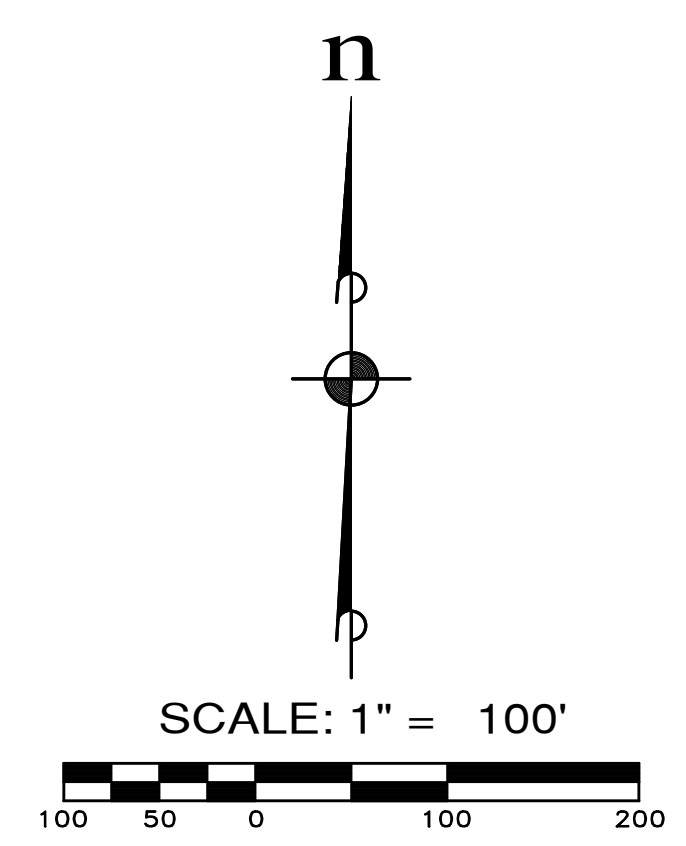
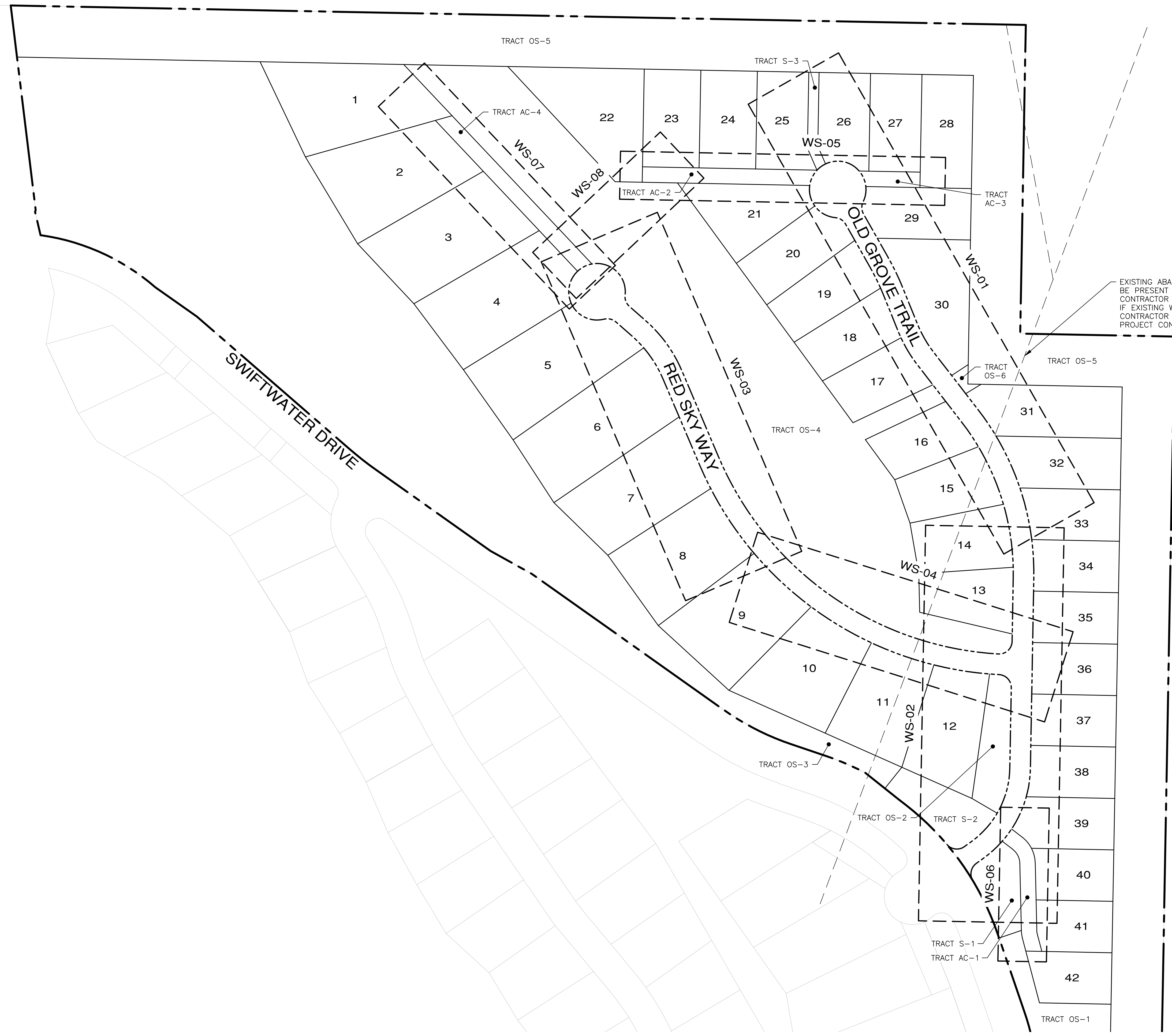
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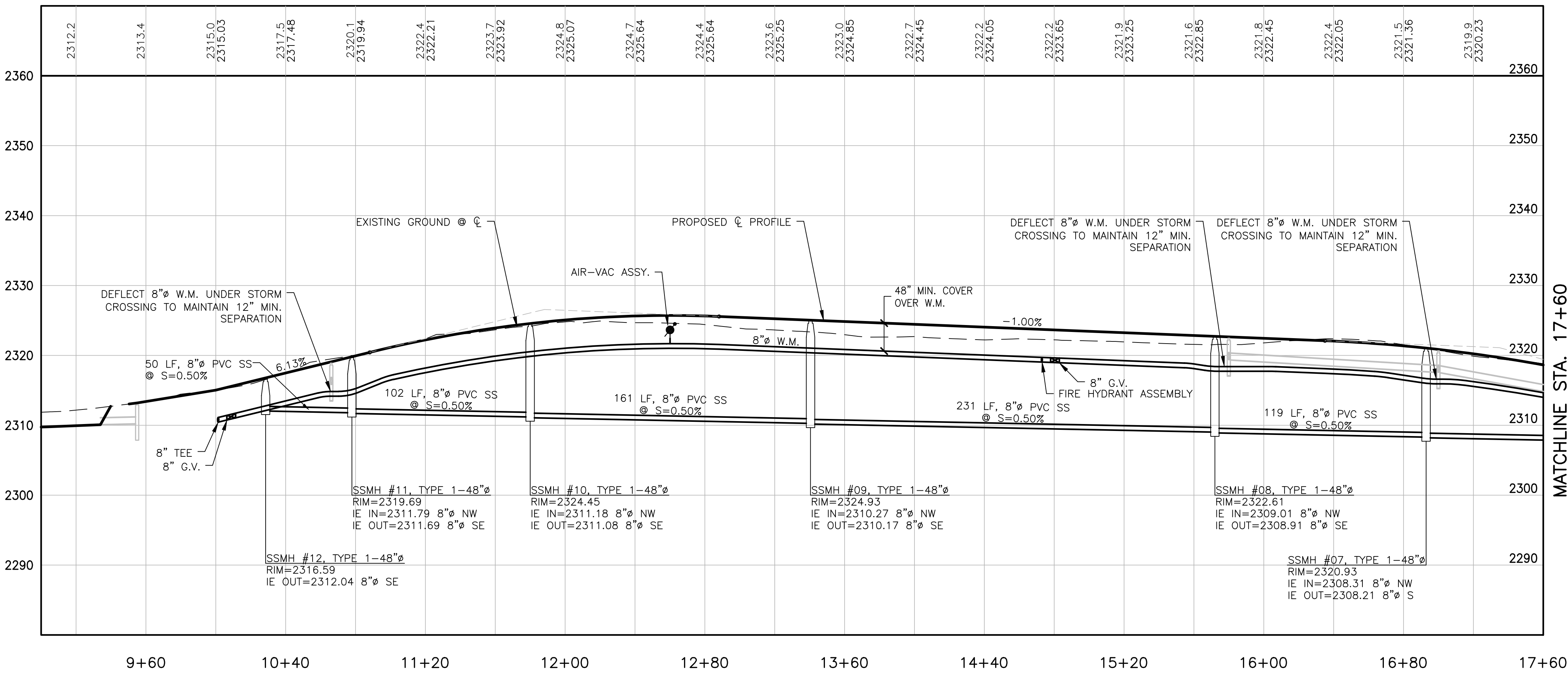
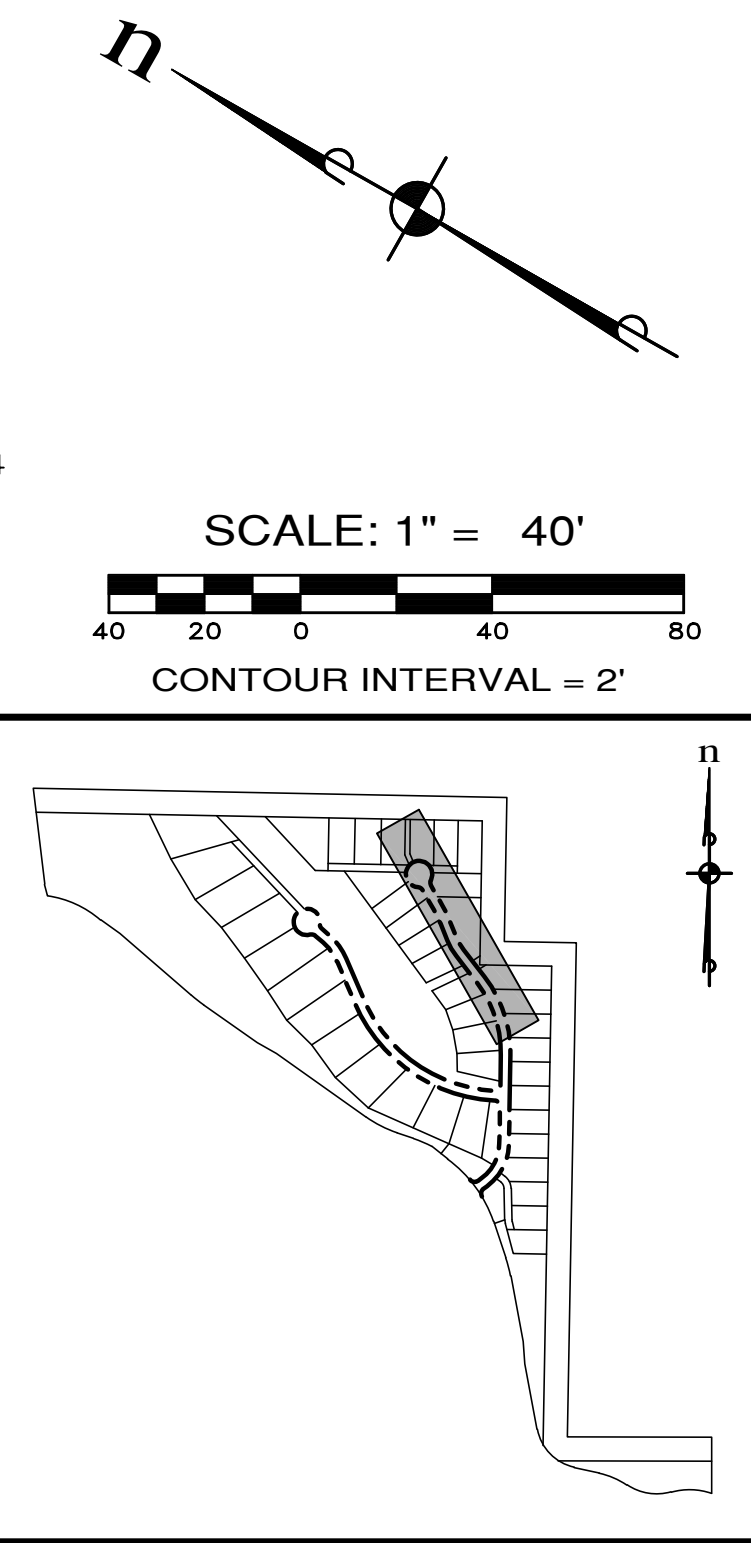
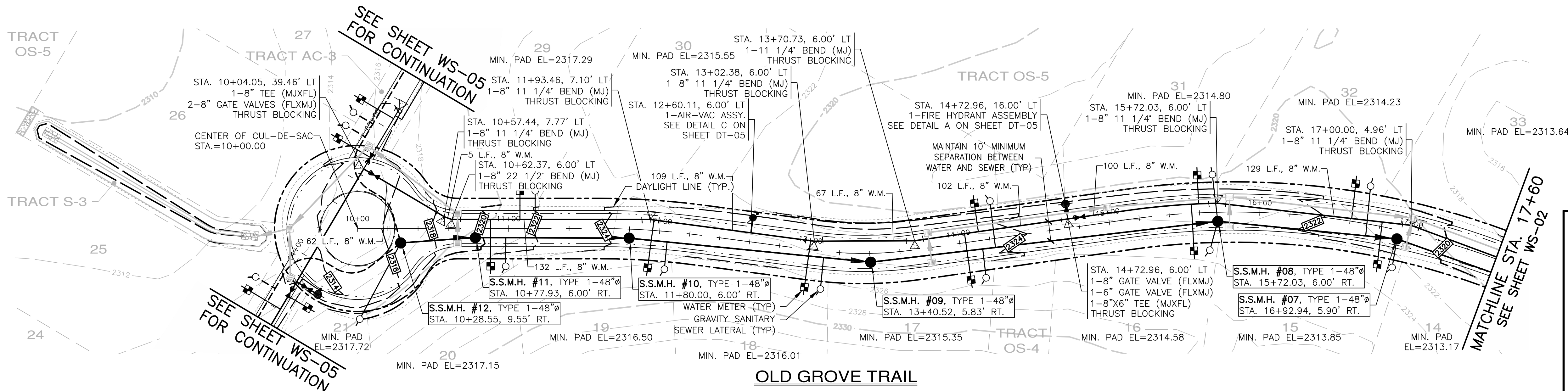
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 WATER/SEWER KEY MAP

KITTITAS COUNTY WASHINGTON

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 14 OF 29 SHEETS

A PORTION OF SECTION 13, T. 20 N., R. 14 E., AND SECTION 18, T. 20 N., R. 15 E., W.M., KITTITAS COUNTY, WASHINGTON



- NOTES:**
1. CONTRACTOR TO VERIFY LOCATION, ELEVATION, SIZE AND TYPE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR TO PROVIDE UTILITY LOCATES TO CONFIRM EXISTING WATER INFRASTRUCTURE SUCH AS GATE VALVES AND BLOW-OFFS.
 2. MAINTAIN A MINIMUM OF 1' SEPARATION BETWEEN CB STRUCTURES AND 8" WATER MAIN.
 3. PRESERVE AND PROTECT EXISTING GRAVITY 8" SEWER & FORCE MAIN. CONTRACTOR TO ADJUST SSMH RIM TO PROPOSED FINISHED GRADE.

SCALE: 1"=40' HORIZ.
1"=10' VERT.



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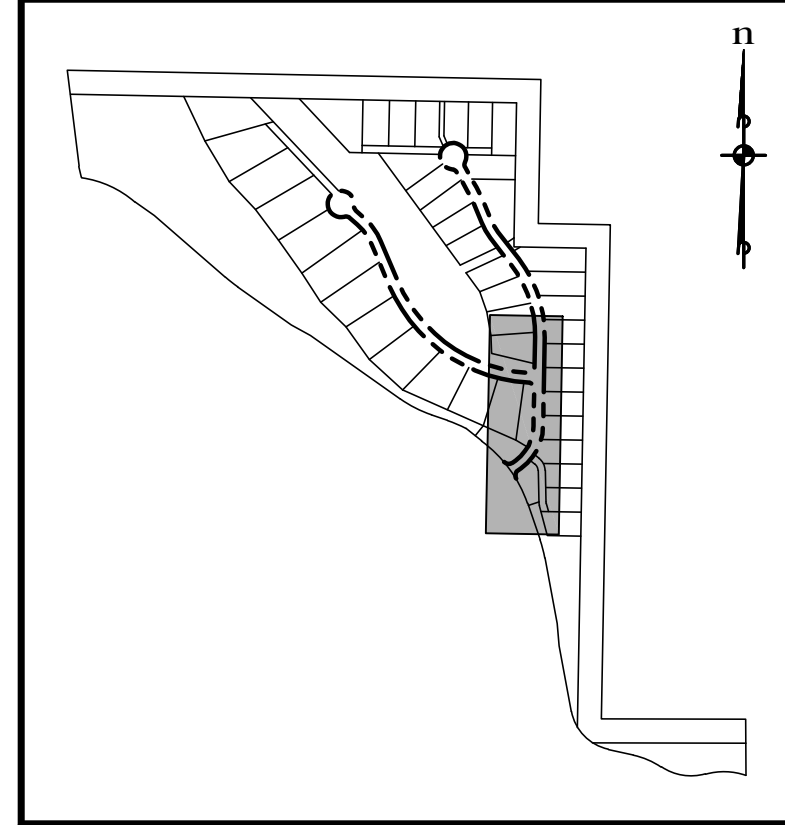
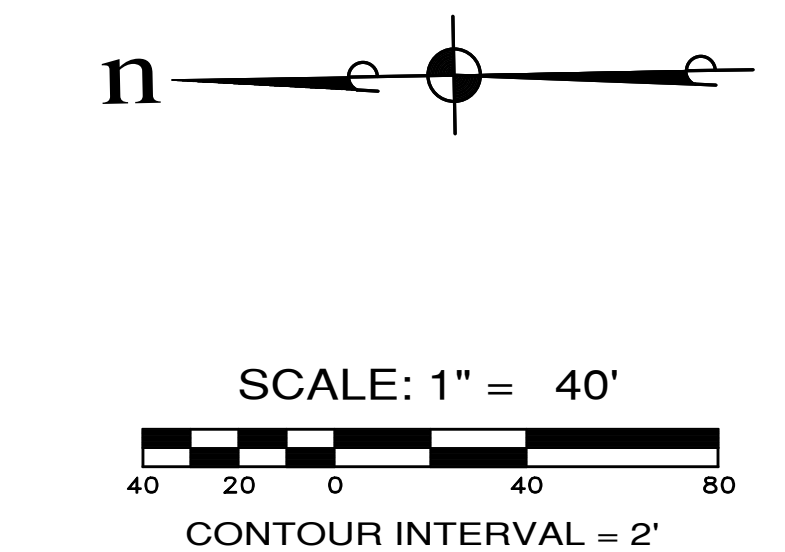
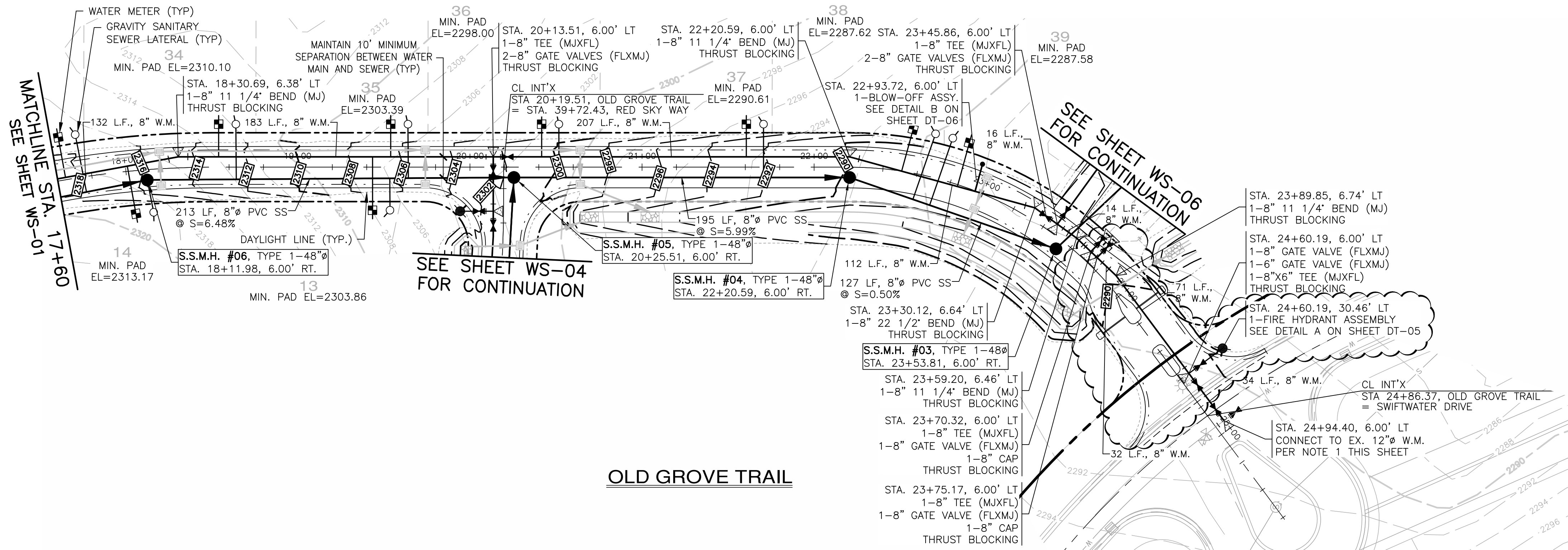
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 WATER/SEWER PLAN & PROFILE

WASHINGTON
 KITTITAS COUNTY

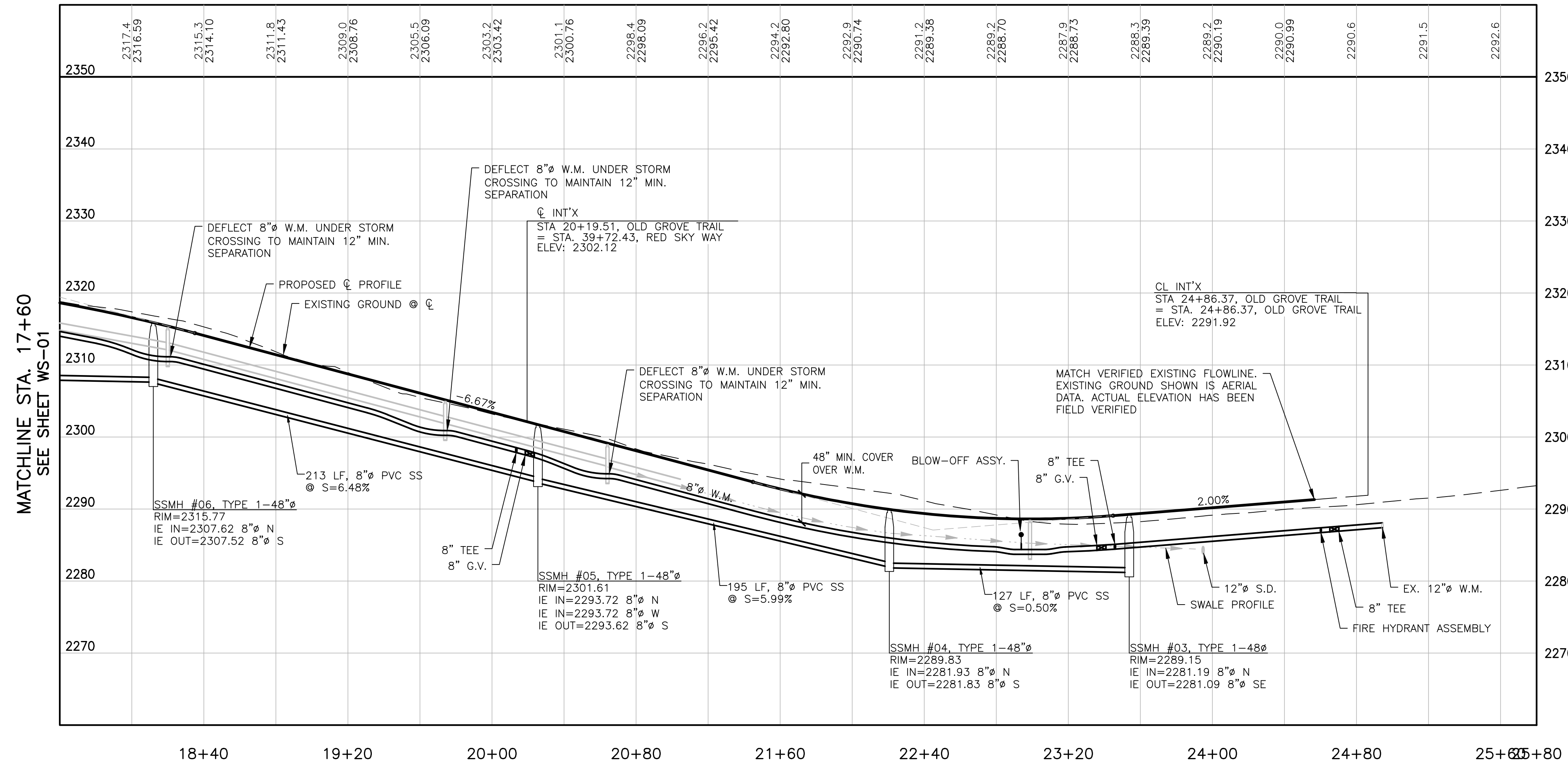
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OLD GROVE TRAIL



KEY MAP

- NOTES:**
1. CONTRACTOR TO VERIFY LOCATION, ELEVATION, SIZE AND TYPE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR TO PROVIDE UTILITY LOCATES TO CONFIRM EXISTING WATER INFRASTRUCTURE SUCH AS GATE VALVES AND BLOW-OFFS.
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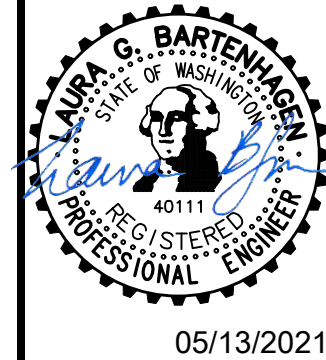
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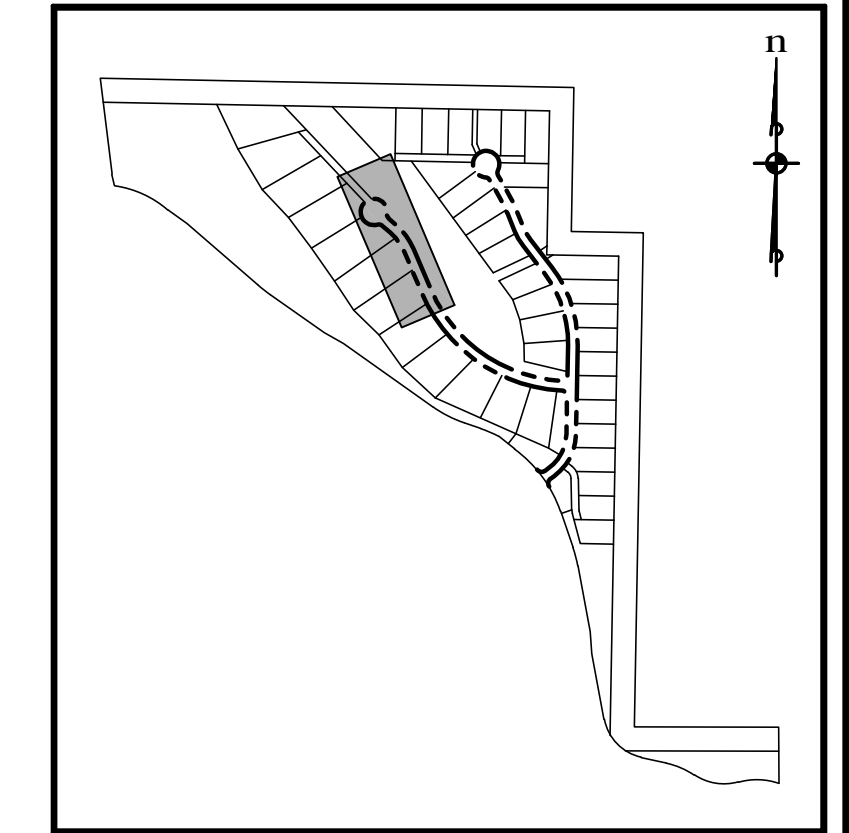
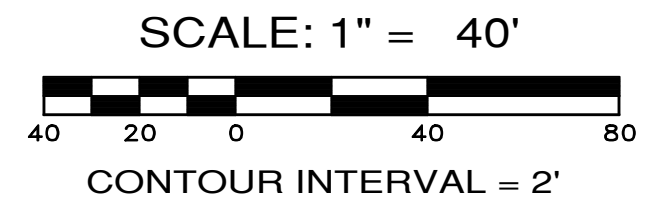
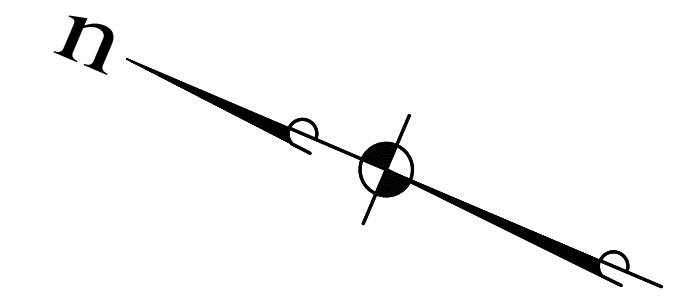
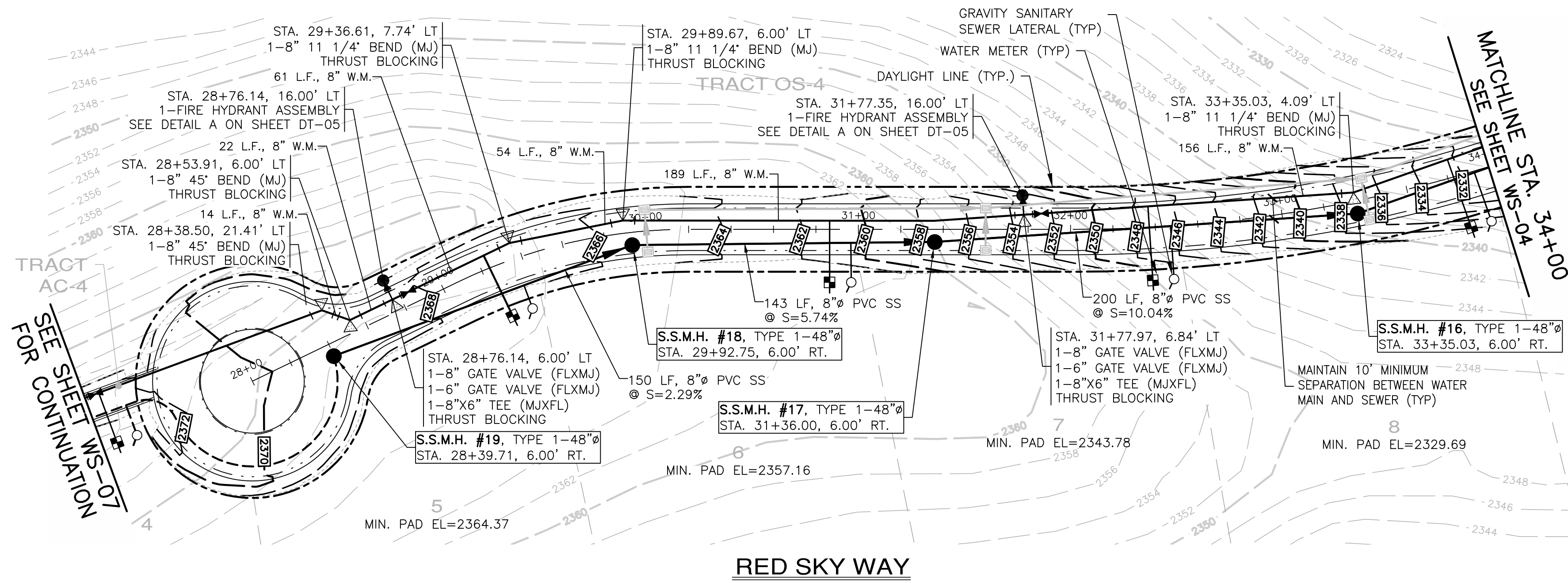
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KITTITAS COUNTY

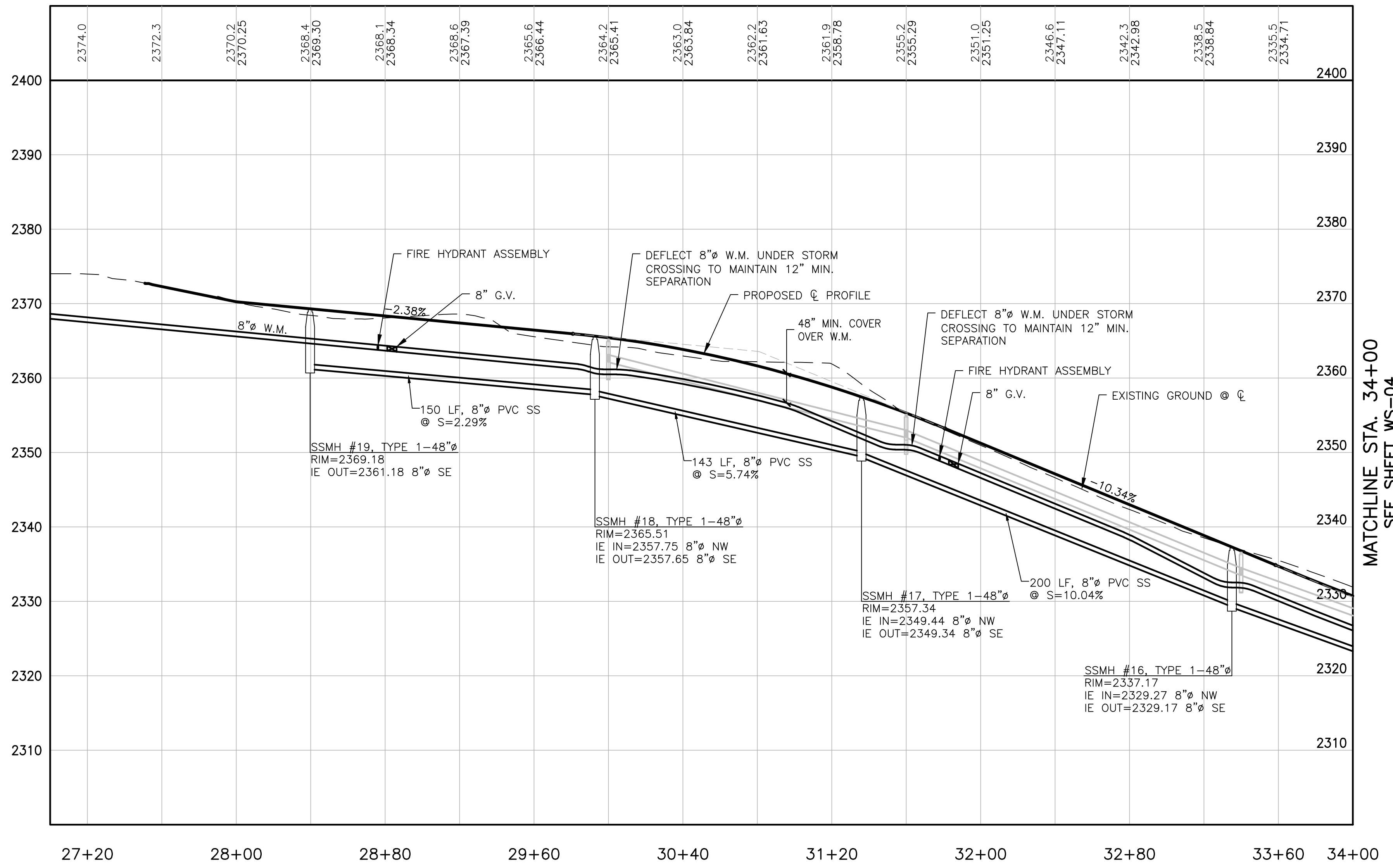
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KEY MAP



MATCHLINE STA. 34+00
SEE SHEET WS-04

- NOTES:
- CONTRACTOR TO VERIFY LOCATION, ELEVATION, SIZE AND TYPE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR TO PROVIDE UTILITY LOCATES TO CONFIRM EXISTING WATER INFRASTRUCTURE SUCH AS GATE VALVES AND BLOW-OFFS.
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SCALE: 1"=40' HORIZ.
1"=10' VERT.



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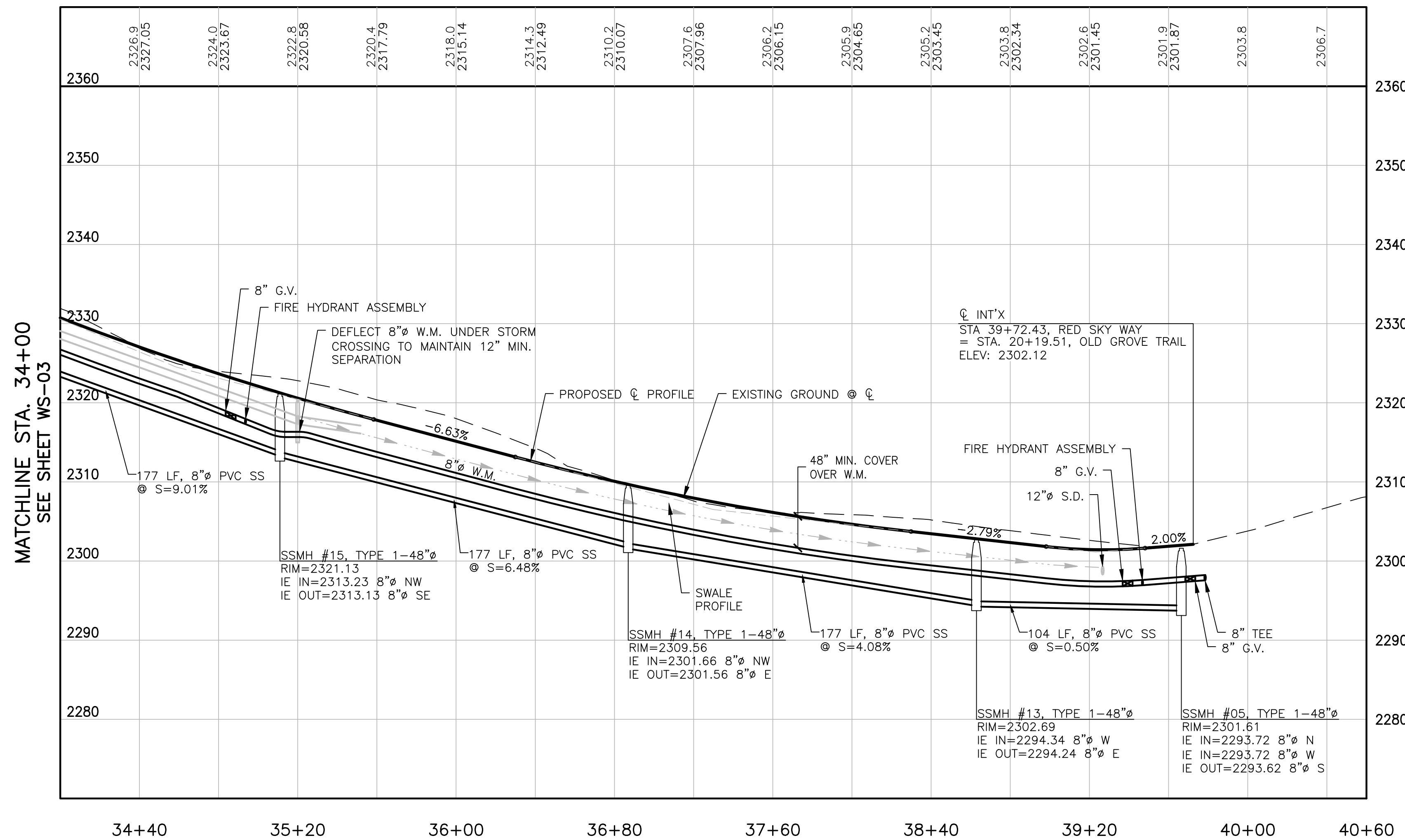
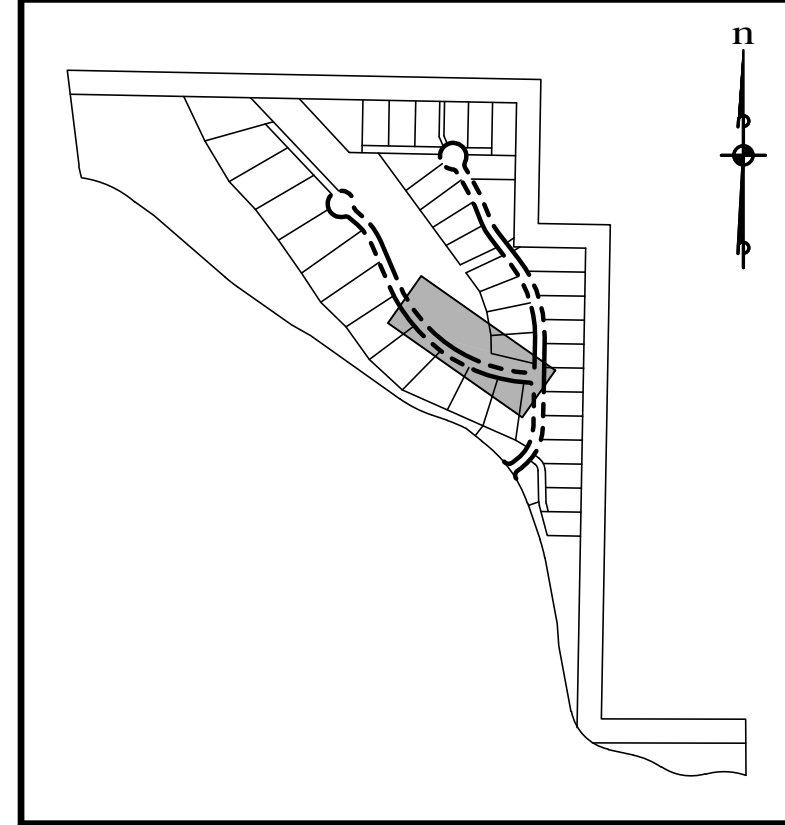
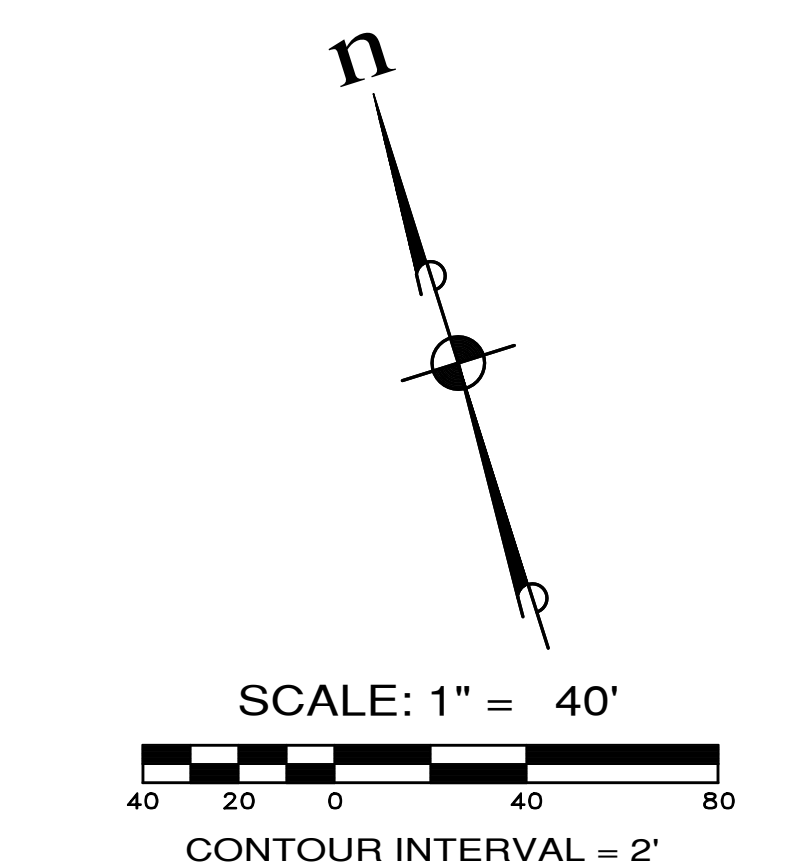
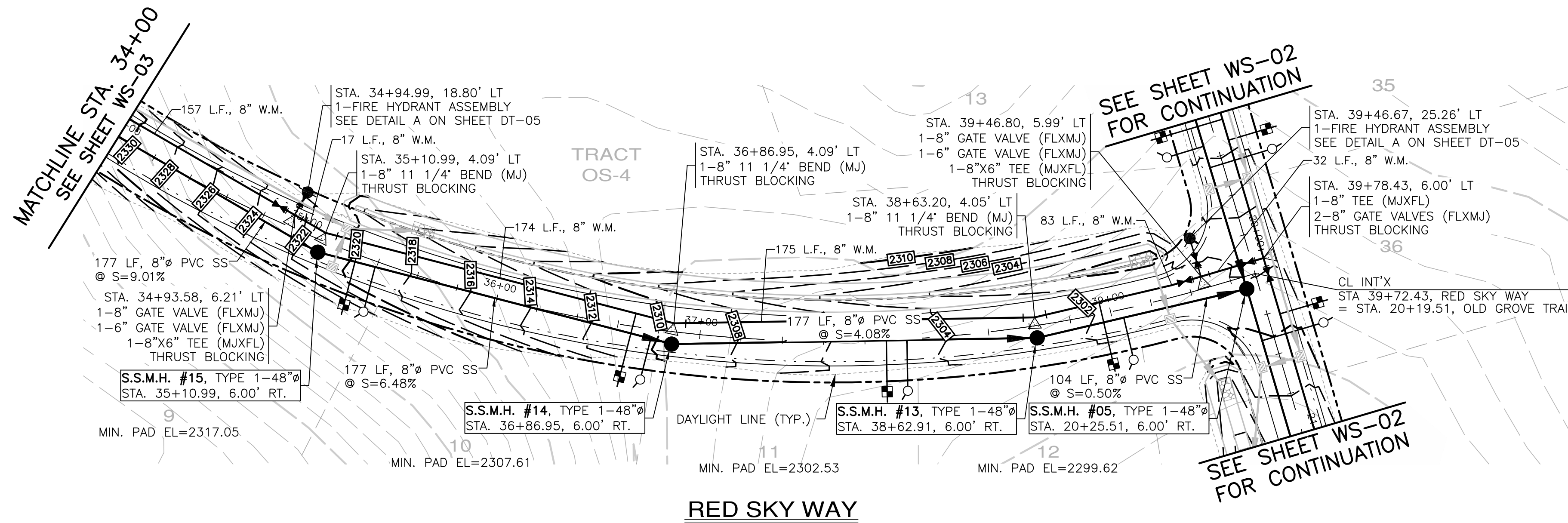
KITTITAS COUNTY

JOB NO.:	998-812-020
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A PORTION OF SECTION 13, T. 20 N., R. 14 E., AND SECTION 18, T. 20 N., R. 15 E., W.M., KITTITAS COUNTY, WASHINGTON



SCALE: 1"=40' HORIZ.
1"=10' VERT.

- NOTES:**
1. CONTRACTOR TO VERIFY LOCATION, ELEVATION, SIZE AND TYPE PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES. CONTRACTOR TO PROVIDE UTILITY LOCATES TO CONFIRM EXISTING WATER INFRASTRUCTURE SUCH AS GATE VALVES AND BLOW-OFFS.
 2. MAINTAIN A MINIMUM OF 1' SEPARATION BETWEEN CB STRUCTURES AND 8" WATER MAIN.
 3. PRESERVE AND PROTECT EXISTING GRAVITY 8" SEWER & FORCE MAIN. CONTRACTOR TO ADJUST SSMH RIM TO PROPOSED FINISHED GRADE.



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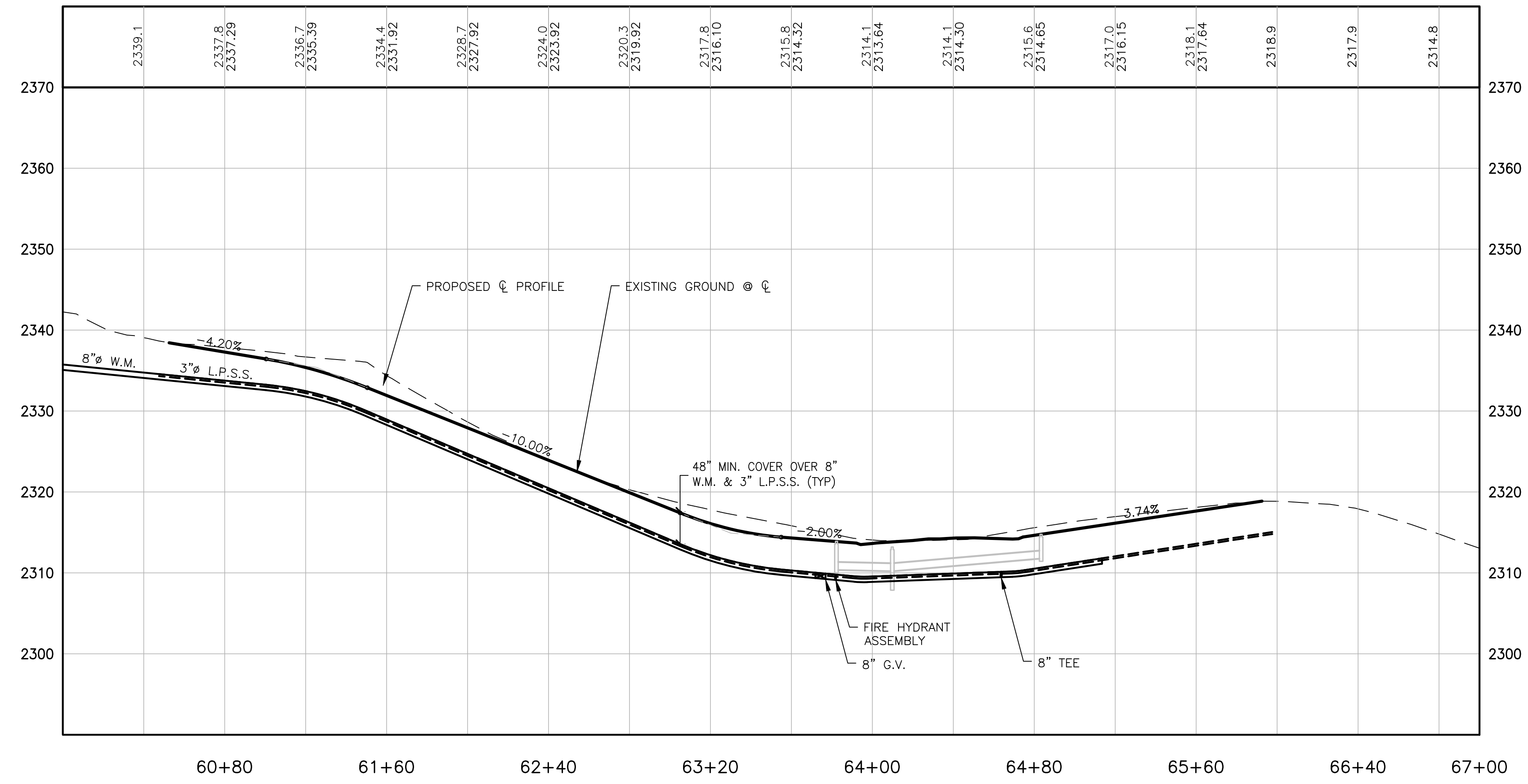
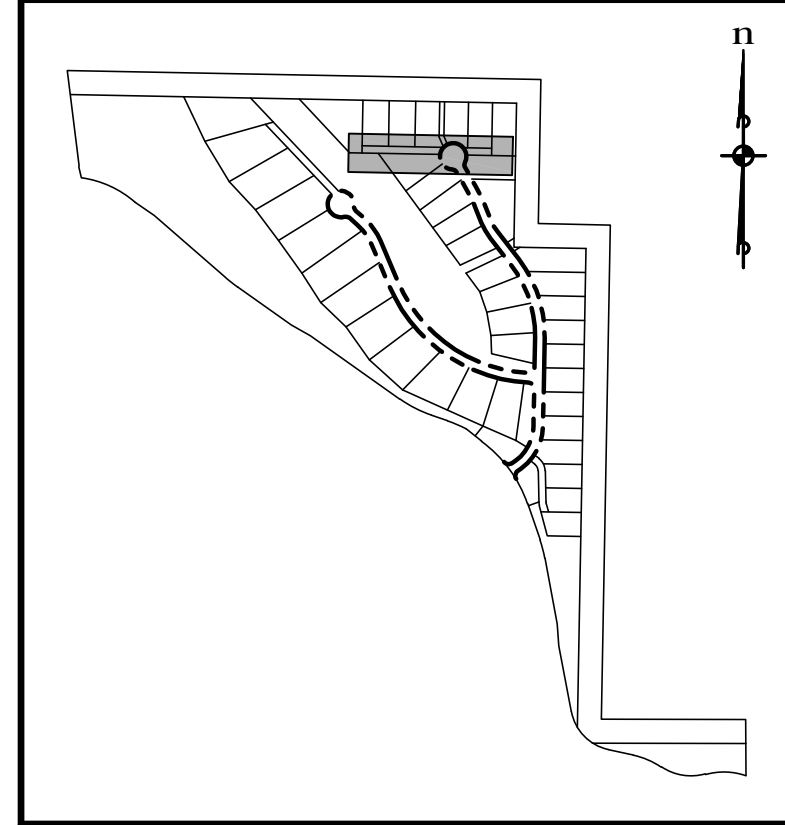
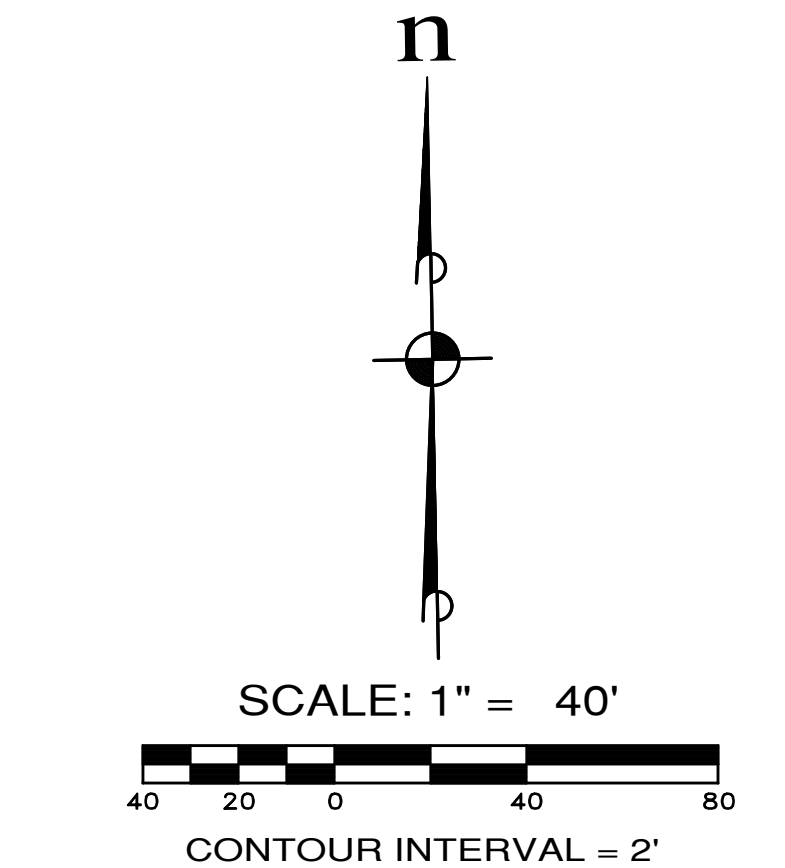
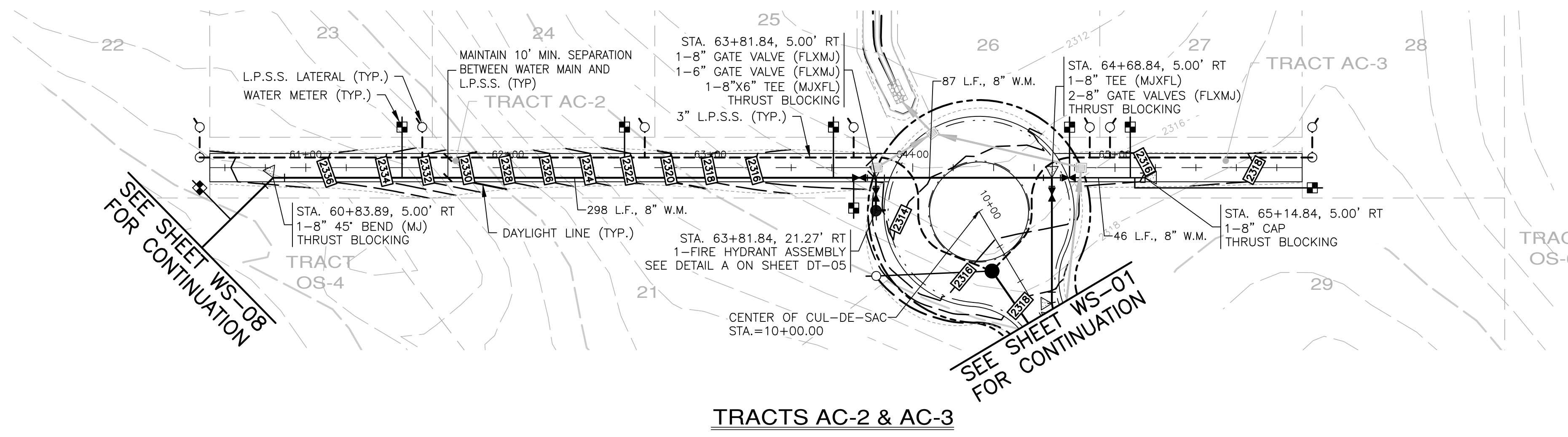
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KITTITAS COUNTY

JOB NO.: 998-812-020
DWG. NAME: WS-04
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- KEY MAP**
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40111
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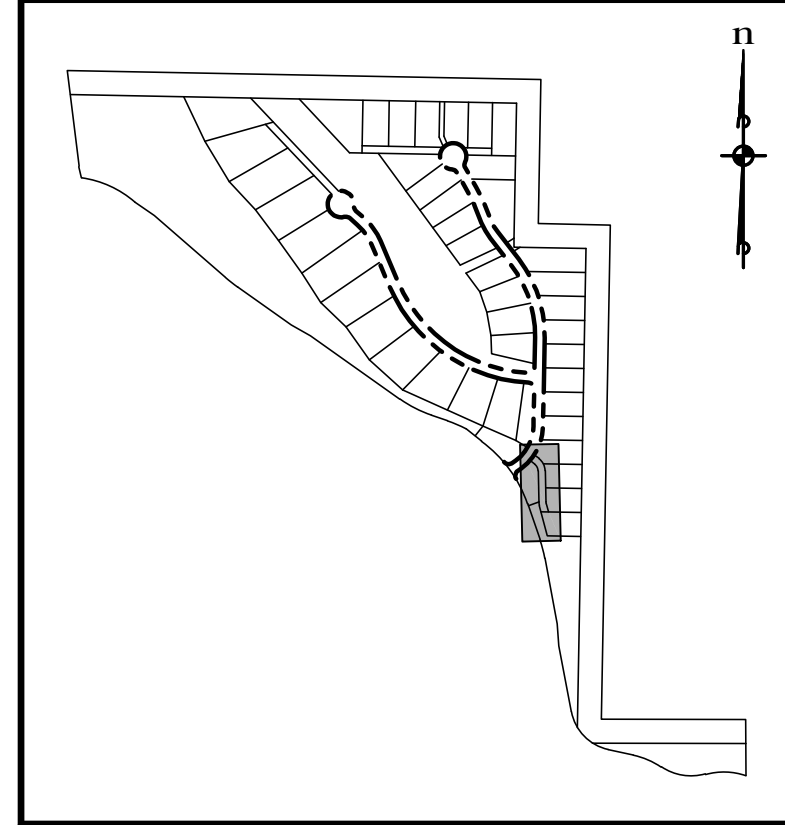
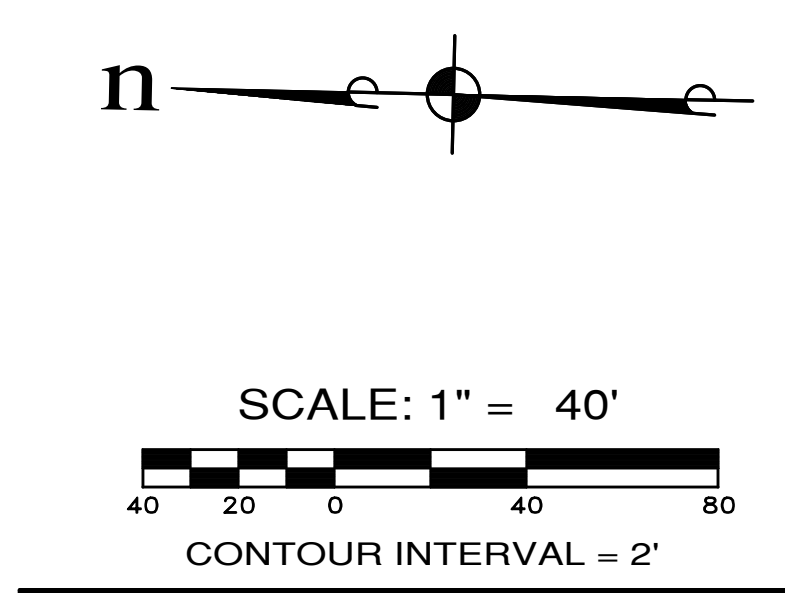
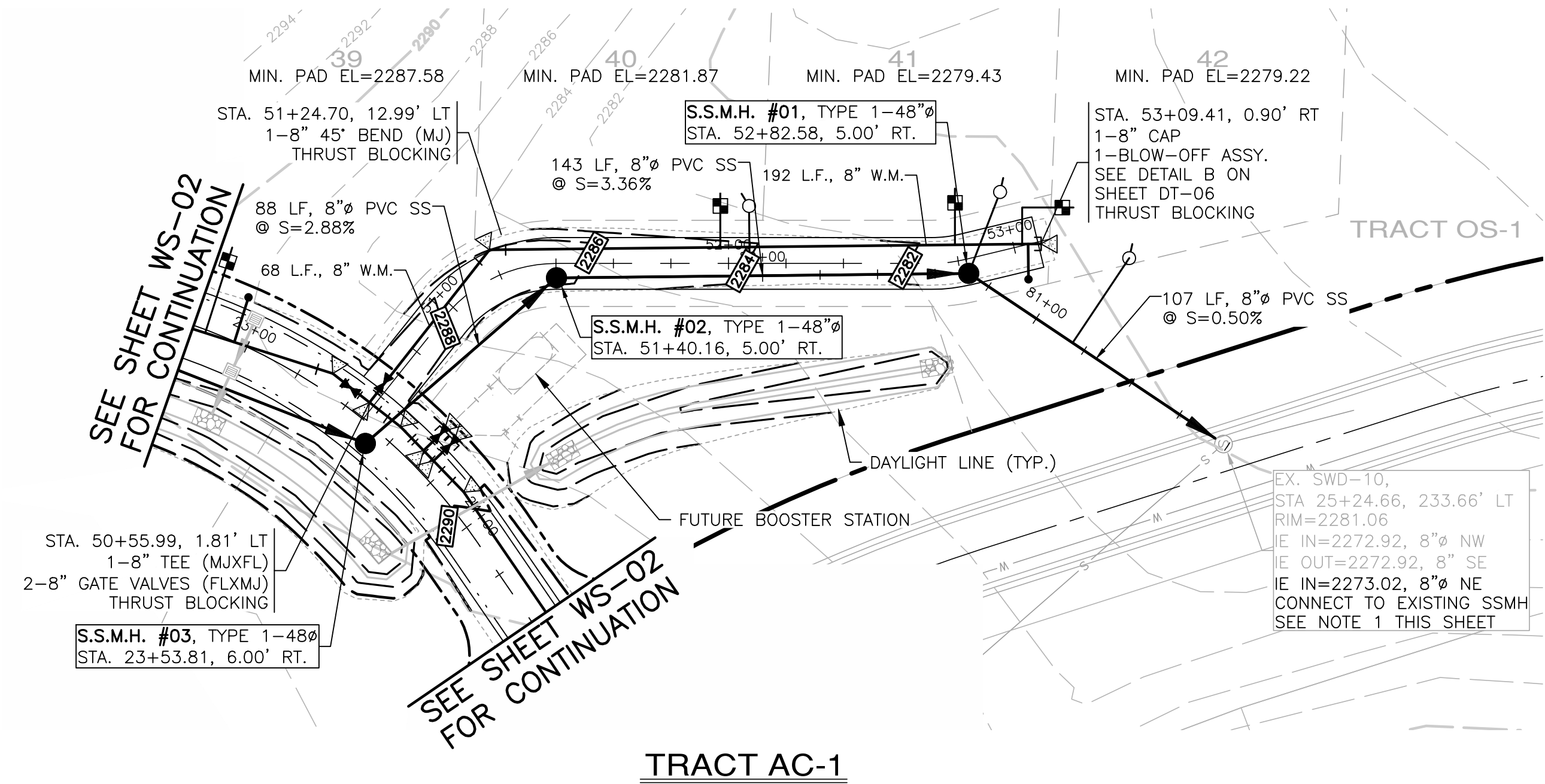
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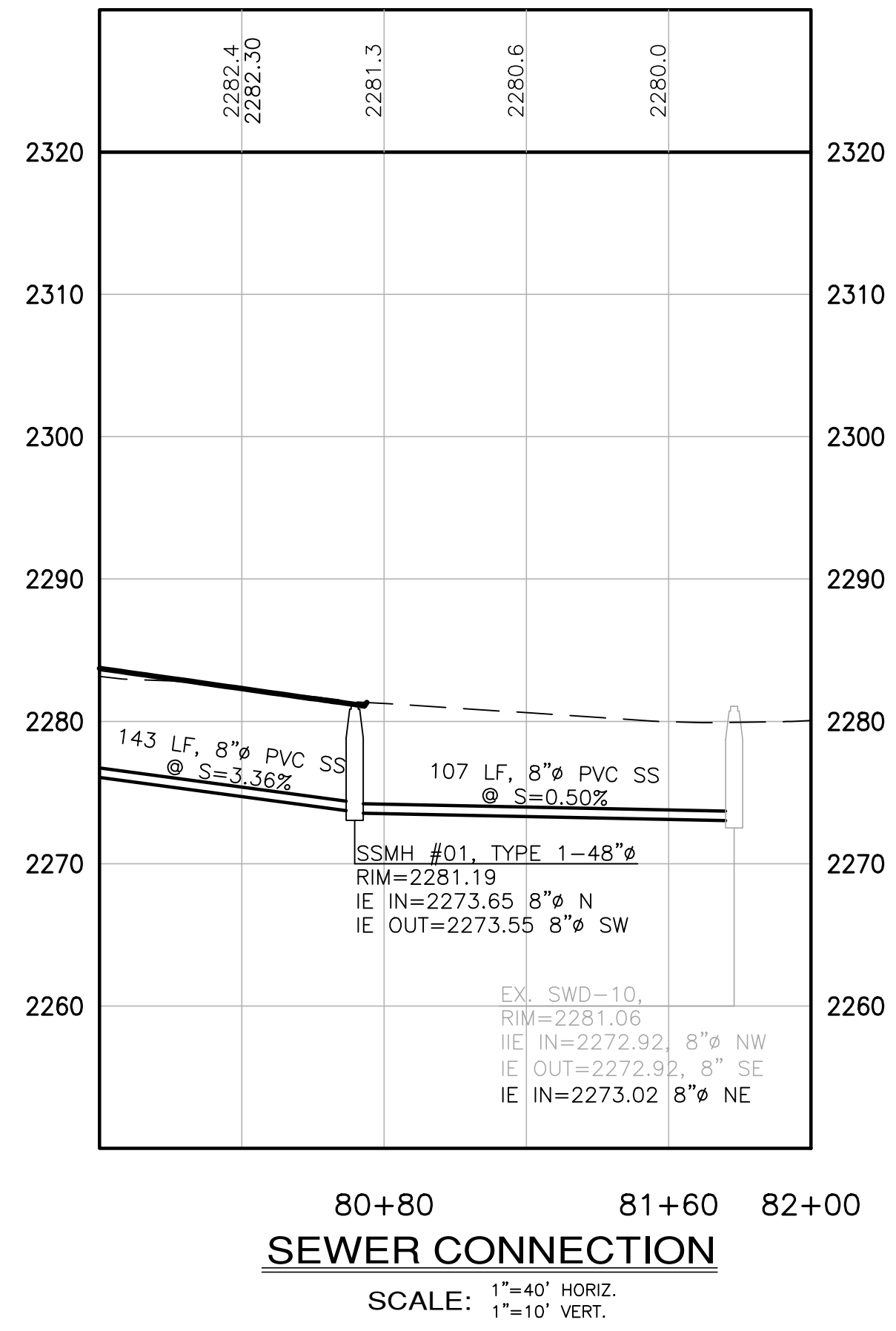
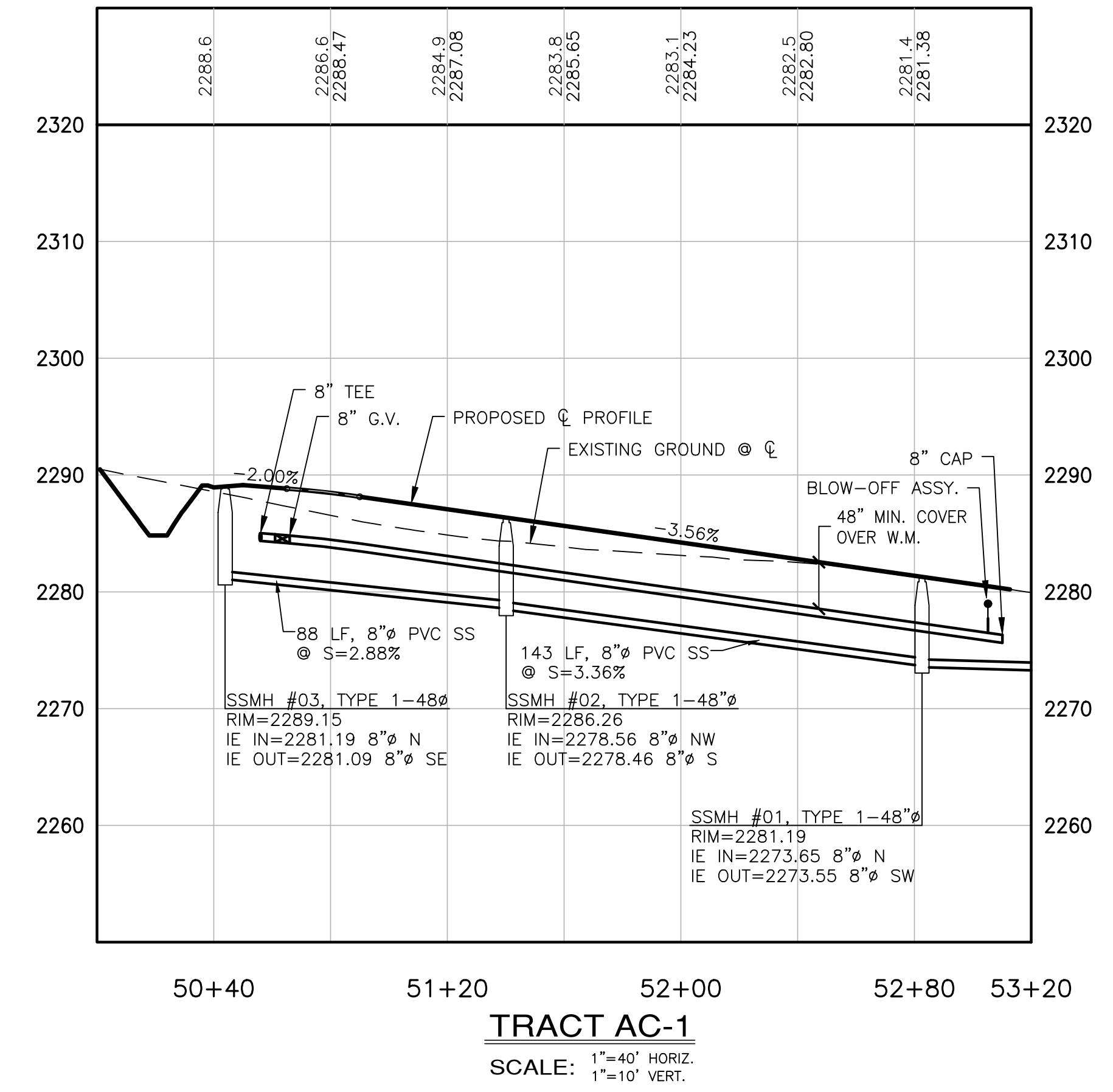
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A PORTION OF SECTION 13, T. 20 N., R. 14 E., AND SECTION 18, T. 20 N., R. 15 E., W.M., KITTITAS COUNTY, WASHINGTON



KEY MAP



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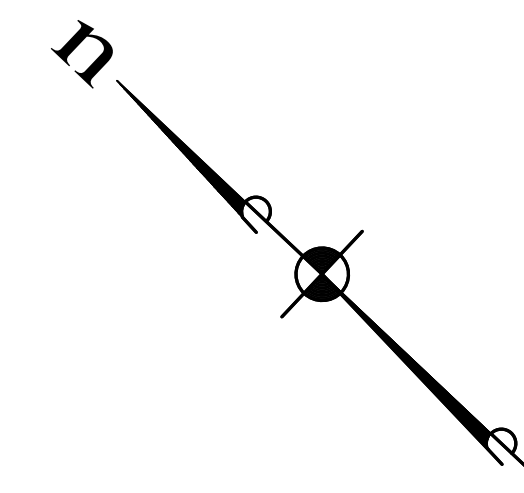
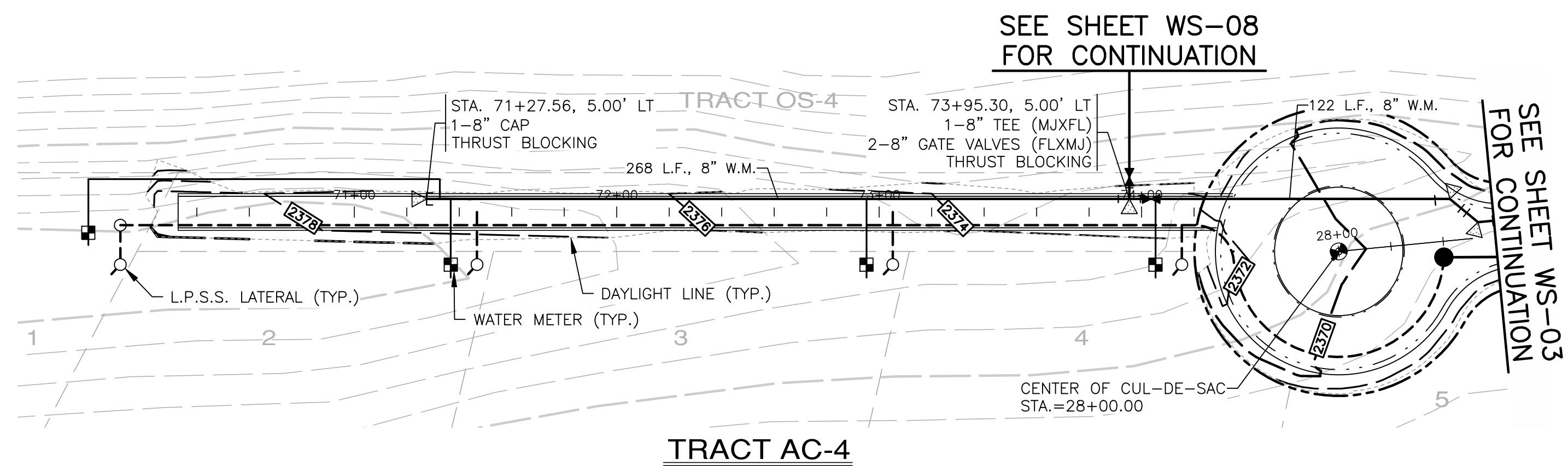
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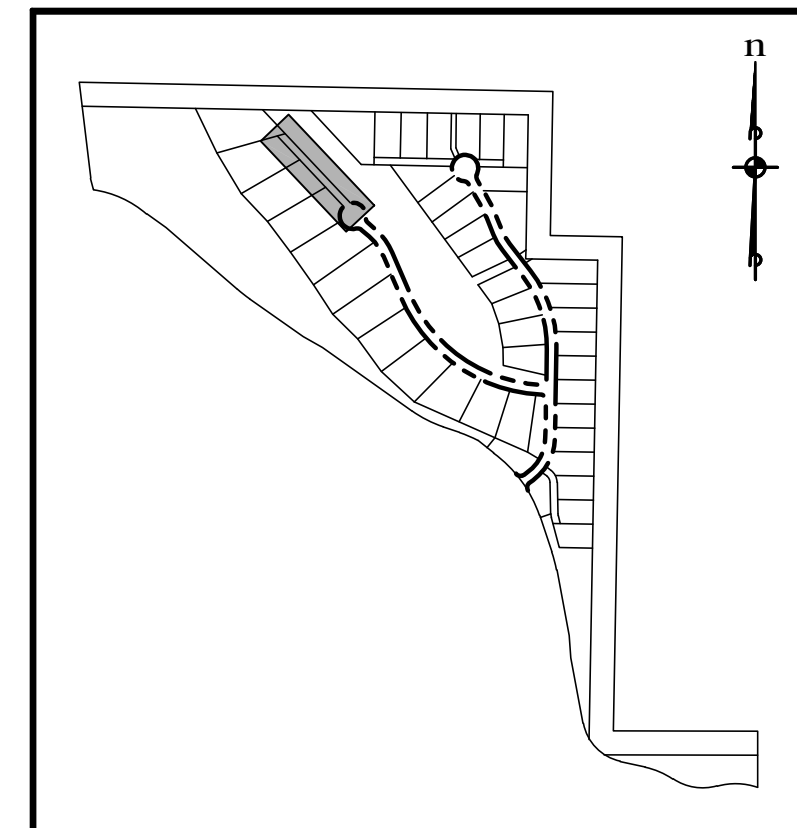
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 DWG. NAME: WS-06
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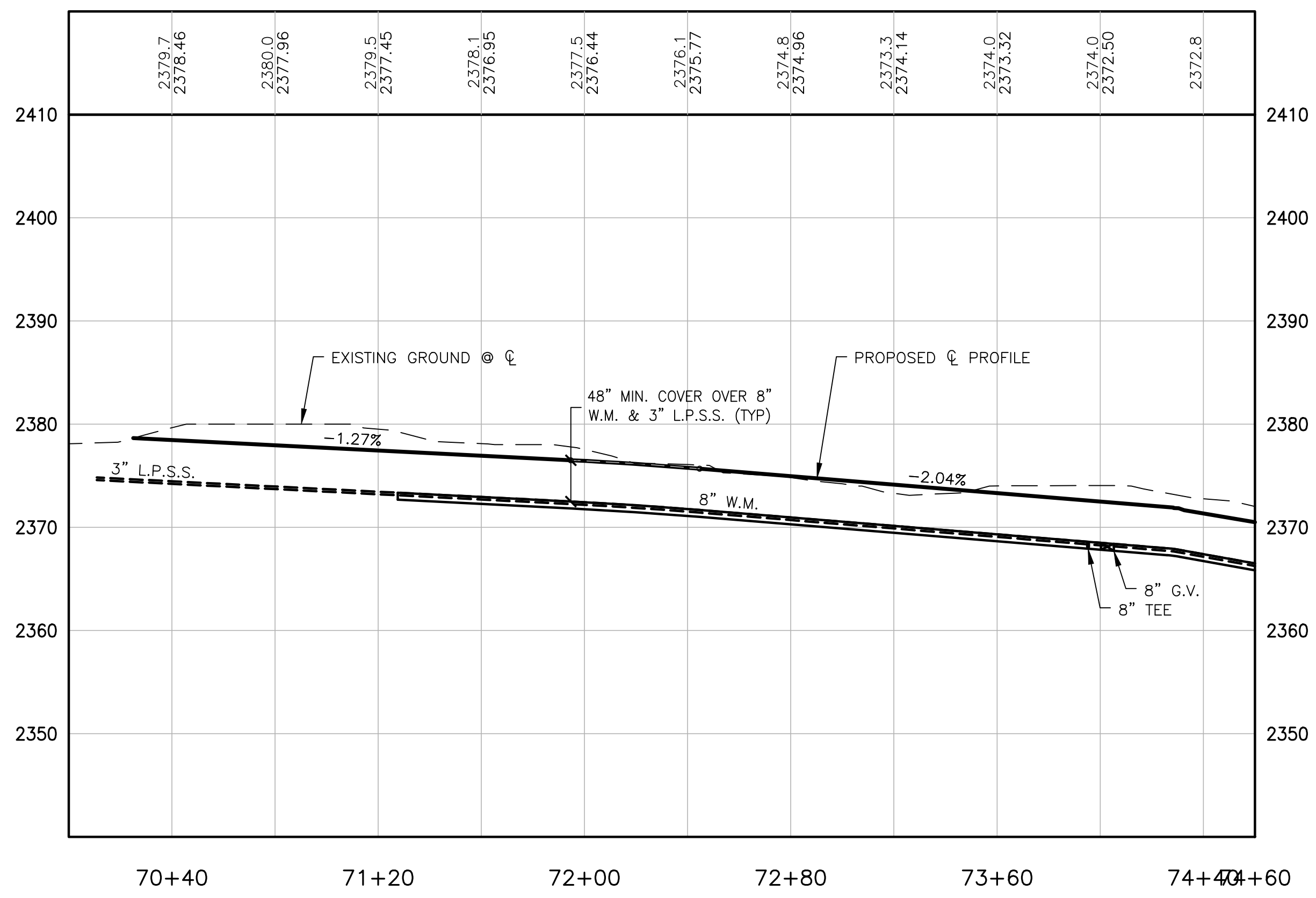
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SCALE: 1" = 40'
 40 20 0 40 80
 CONTOUR INTERVAL = 2'



KEY MAP



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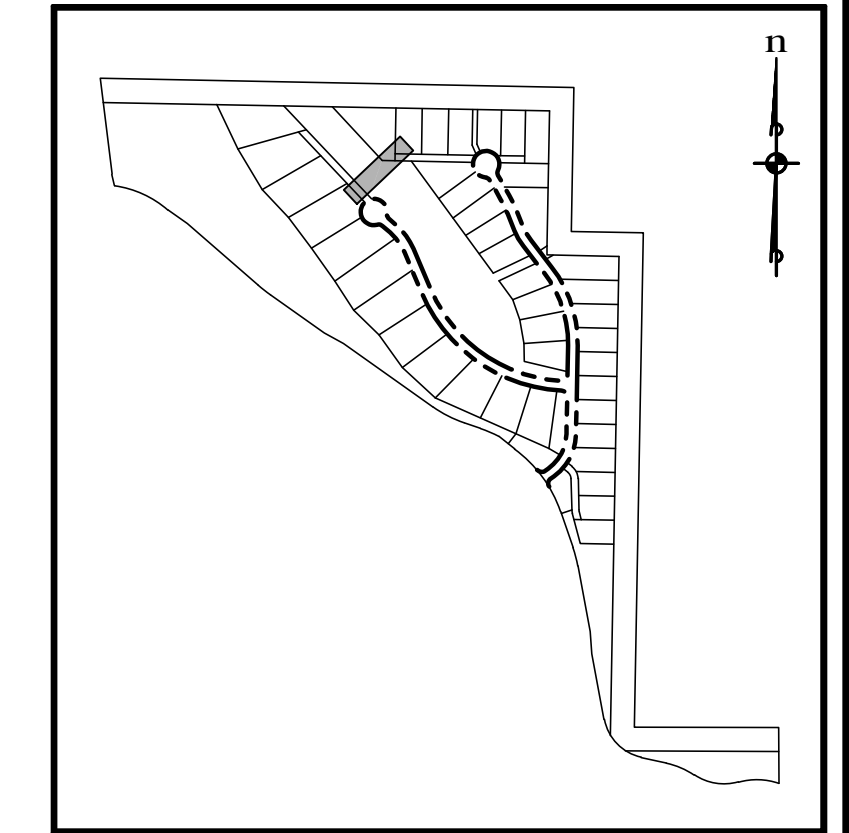
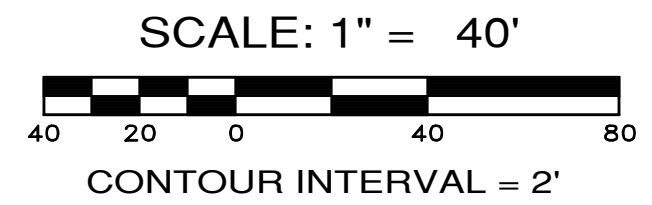
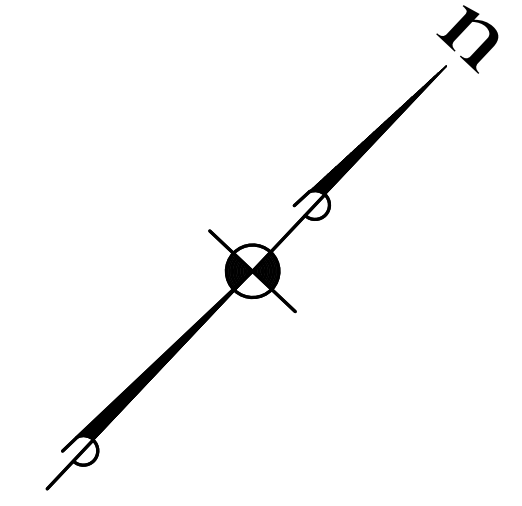
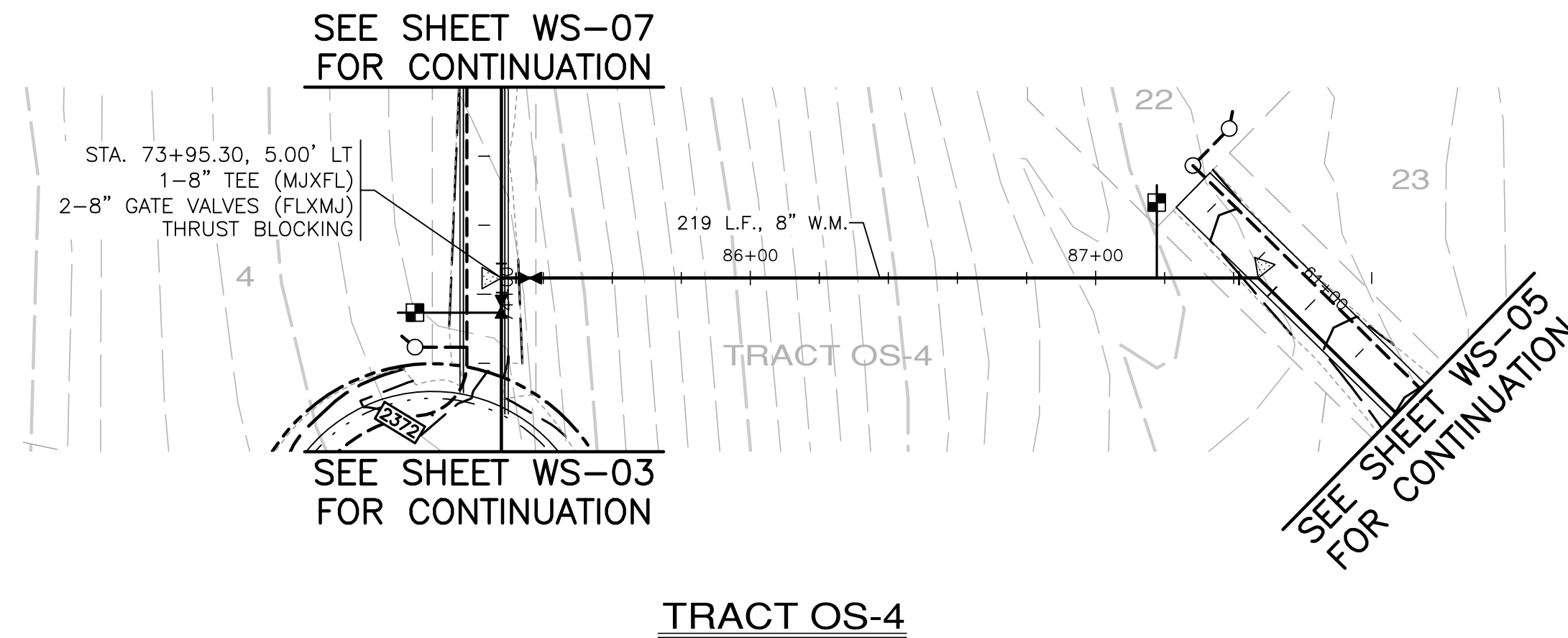
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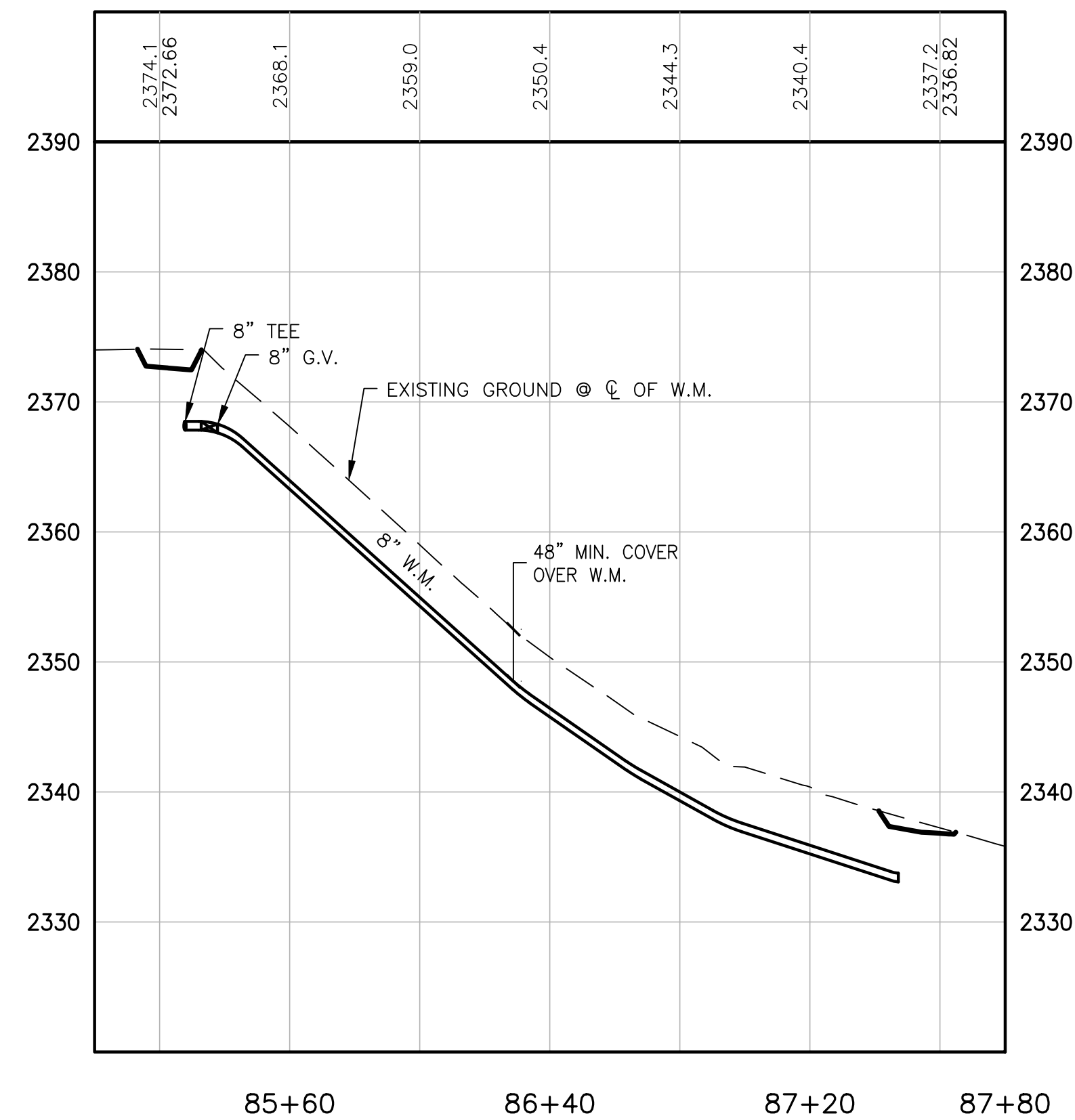
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KEY MAP



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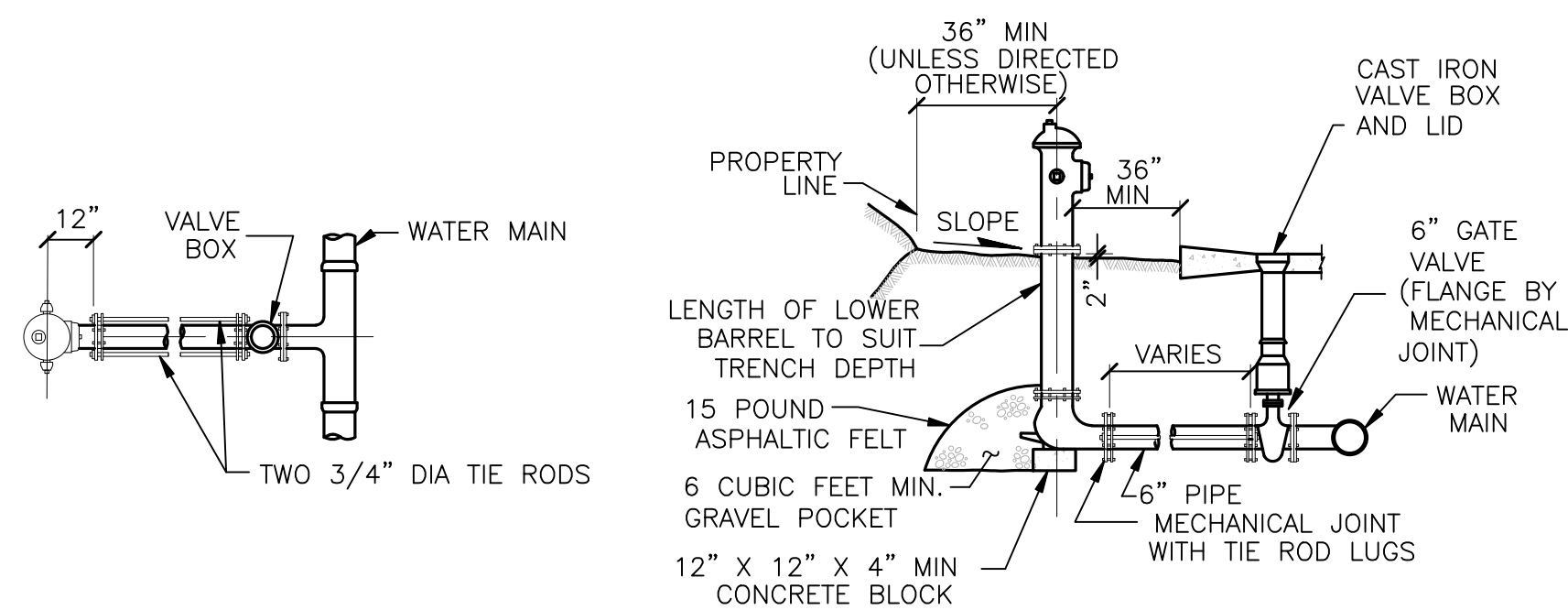
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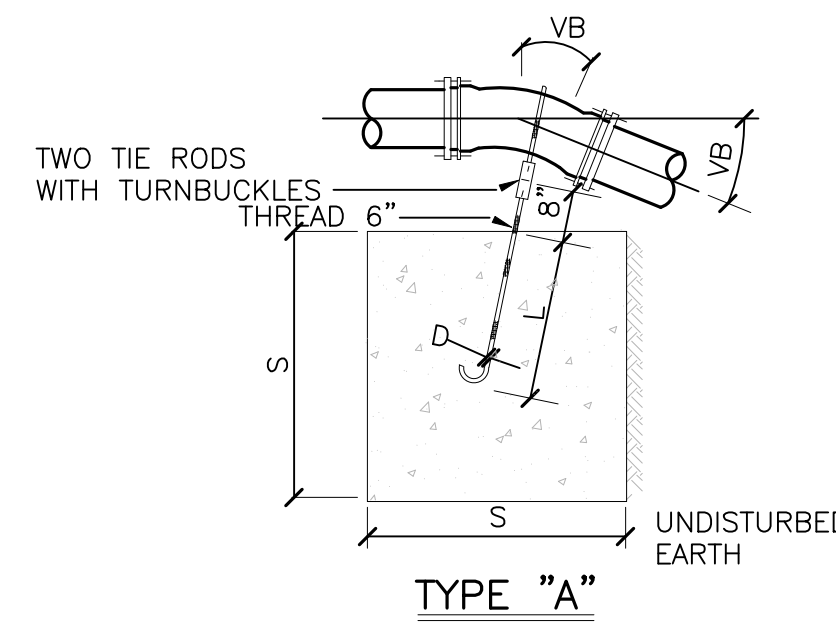
PLAN

ELEVATION

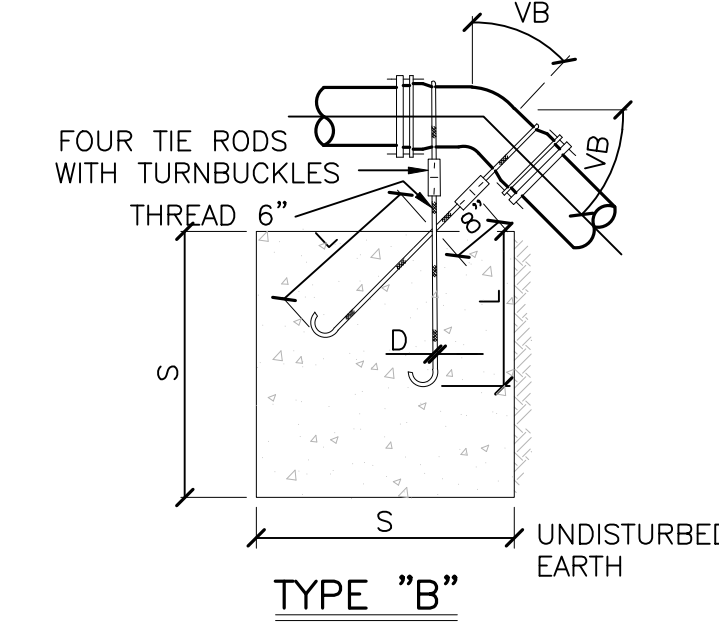
NOTES:

1. HYDRANT SHALL KENNEDY MODEL K81D AND PAINTED YELLOW.
2. STEEL TIE RODS TO BE HEAVILY COATED WITH ASPHALT AFTER INSTALLATION.
3. RESTRAINED JOINTS MAY BE SUBSTITUTED FOR THE RODS.
4. SURFACE OF GROUND WITHIN 36" OF HYDRANT TIE SHALL BE SMOOTH AND CLEAR OF ALL OBSTRUCTIONS.

(A) HYDRANT SETTING
NOT TO SCALE



TYPE "A"



TYPE "B"

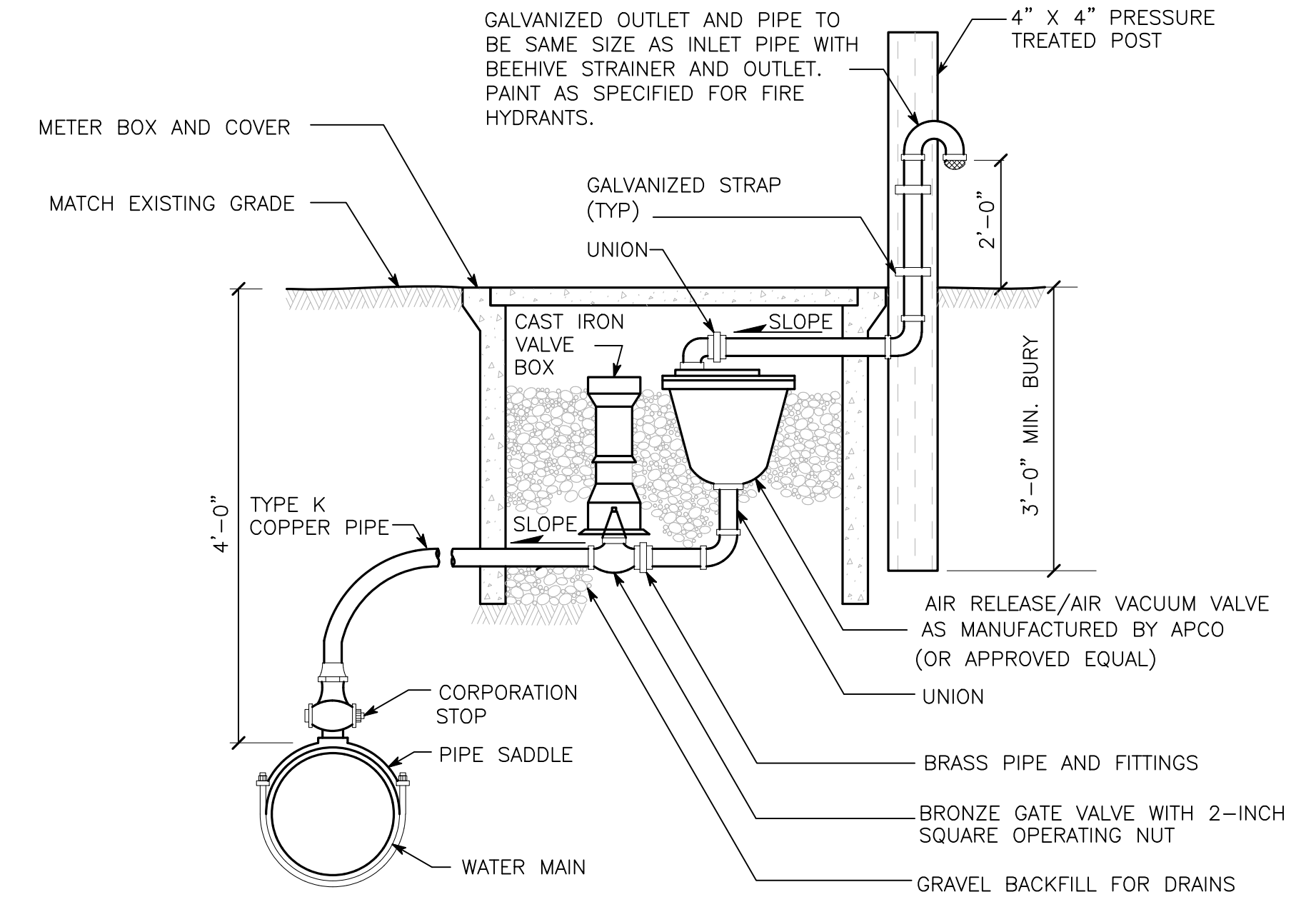
TYPE "A" BLOCKING FOR 11 1/4"-22" VERTICAL BENDS

PIPE SIZE NOMINAL DIAMETER - INCHES	TEST PRESSURE PSI	VERTICAL BEND DEGREES	No. OF CU. FT. OF CONC. BLOCKING	SIDE OF CUBE LIN. FT.	DIAM. OF TIE RODS INCHES	DEPTH OF RODS IN CONCRETE INCHES
4	250	11 1/4	6	1.8	5/8	17
		22 1/2	12	2.3		
6	250	11 1/4	14	2.4	5/8	17
		22 1/2	27	3.0		
8	250	11 1/4	25	2.9	5/8	17
		22 1/2	48	3.6		
10	250	11 1/4	38	3.4	5/8	17
		22 1/2	75	4.2		
12	250	11 1/4	55	3.8	5/8	17
		22 1/2	108	4.8		
14	250	11 1/4	75	4.2	5/8	17
		22 1/2	147	5.3		
16	250	11 1/4	98	4.6	5/8	17
		22 1/2	192	5.8		

TYPE "B" BLOCKING FOR - 45° VERTICAL BENDS

PIPE SIZE	TEST PRESSURE	VB	S	D	L
4	250	45	22	2.8	5/8 17
6	250	45	50	3.7	5/8 17
8	250	45	89	4.5	5/8 17
10	250	45	139	5.2	3/4 20
12	250	45	200	5.8	7/8 24
14	250	45	272	6.5	1 27
16	250	45	355	7.1	1 1/8 30

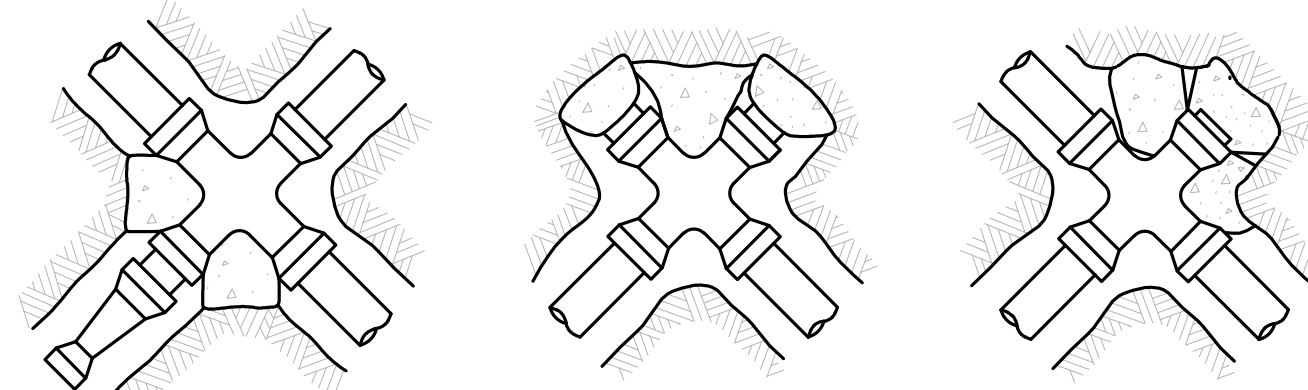
(B) BLOCKING FOR CONVEX VERTICAL BEND
NOT TO SCALE



NOTES:

1. SIZE OF COMBINATION AIR RELEASE/AIR VACUUM VALVE SHALL BE SPECIFIED ON THE PLANS. PIPING AND VALVES SHALL BE THE SAME SIZE AS THE COMBINATION AIR RELEASE/AIR VACUUM VALVE.
2. LOCATE CORPORATION STOP AT THE HIGH POINT OF THE MAIN, TAP TOP OF MAIN.
3. LOCATE METER BOX AS INDICATED ON THE PLANS.

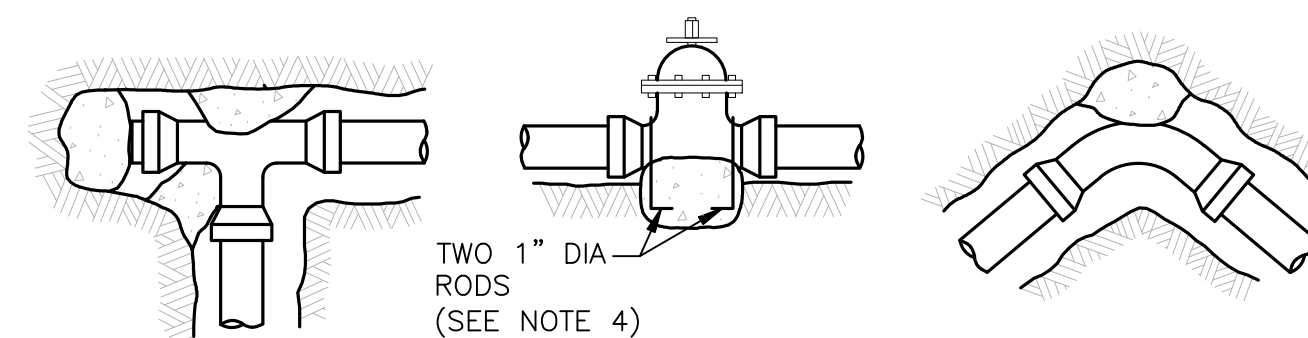
(C) COMBINATION AIR RELEASE/AIR VACUUM VALVE ASSEMBLY
NOT TO SCALE



UNBALANCED CROSS (USE COLUMN "A")

PLUGGED CROSS (USE COLUMN "B")

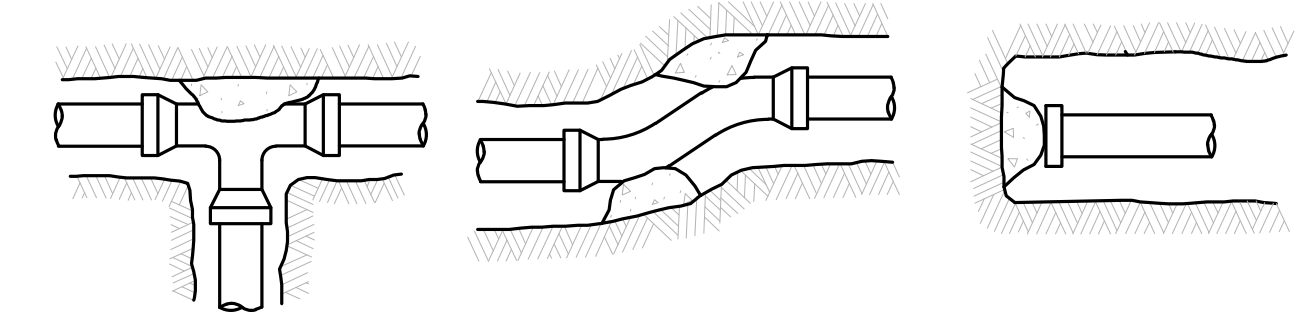
PLUGGED CROSS (USE COLUMN "A")



PLUGGED TEE (USE COLUMN "B")

VALVE (USE COLUMN "A")

BEND



TEE

OFFSET (USE COLUMNS "B" - "E")

DEAD END

NOTES:

1. CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.
2. DIVIDE THRUST BY SAFE BEARING LOAD TO DETERMINE REQUIRED AREA (IN SQUARE FEET) OF CONCRETE TO DISTRIBUTE LOAD.
3. AREAS TO BE ADJUSTED FOR OTHER PRESSURE CONDITIONS.
4. PROVIDE TWO 1" MINIMUM DIAMETER RODS ON VALVES UP THROUGH 10" DIAMETER. VALVES LARGER THAN 10" REQUIRE SPECIAL TIE ROD DESIGN.

SIZE	TEST PRESSURE PSI	THRUST AT FITTINGS IN POUNDS				
		TEE AND DEAD ENDS	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4"	250	3,140	4,440	2,405	1,225	615
6"	250	7,070	9,995	5,410	2,760	1,385
8"	250	12,565	17,770	9,620	4,905	2,465
10"	250	19,635	27,770	15,030	7,660	3,850
12"	250	28,275	39,985	21,640	11,030	5,545
14"	250	38,485	54,425	29,455	15,015	7,545
16"	250	50,265	71,085	38,470	19,615	9,855

SOIL TYPE	SAFE BEARING LOAD PSF
MUCK, PEAT, ETC.	0
SOFT CLAY	1,000
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000
HARD SHALE	10,000

(D) CONCRETE THRUST BLOCK
NOT TO SCALE

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____ DATE _____

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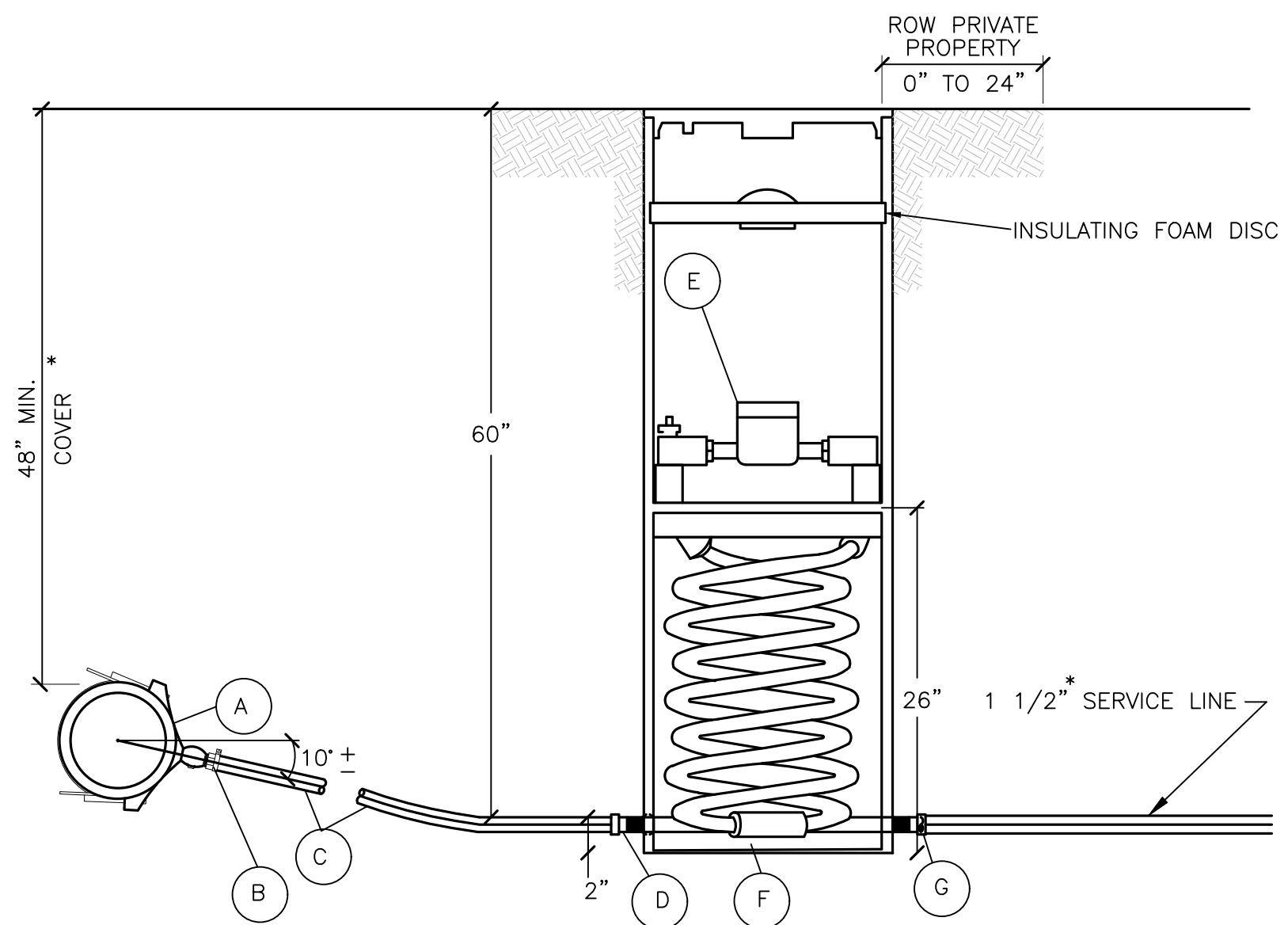
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NELSON RIDGE
WATER/SEWER DETAILS & NOTES

KITTITAS COUNTY WASHINGTON

JOB NO.: 998-812-020
DWG. NAME: DT-05
DESIGNED BY: LGB
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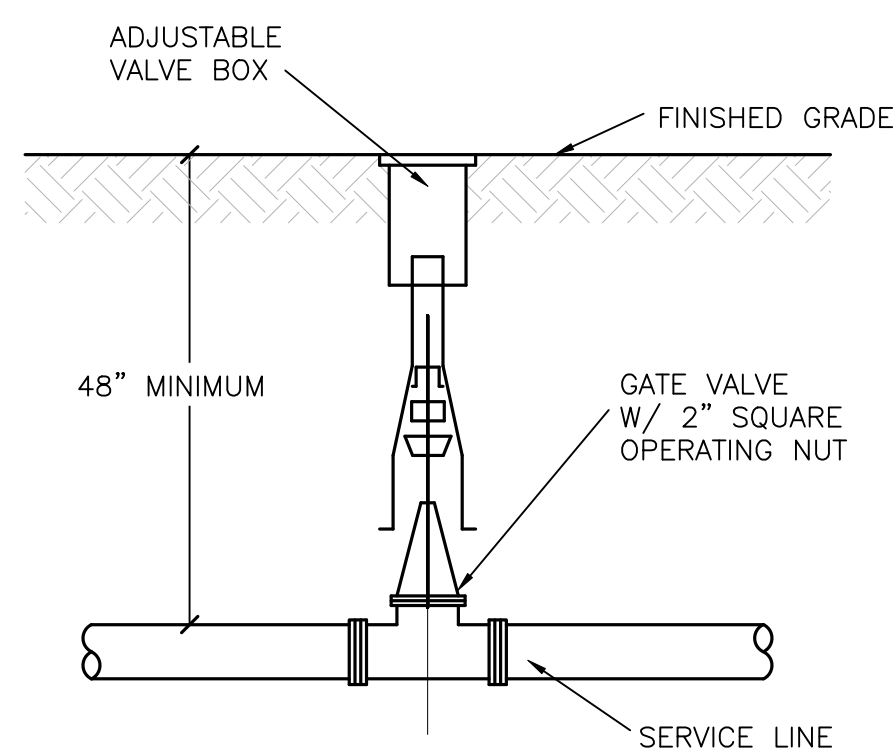
- (A) DOUBLE STRAP STAINLESS STEEL SERVICE SADDLE WITH 1 1/2" AWWA TAPER (CC) TAP, ROMAC 202S, SIZE AS REQUIRED.
- (B) CORPORATION STOP, 1-1/2" AWWA TAPER (CC) INLET BY 1-1/2" PACK JOINT (COMPRESSION FITTING) FOR HDPE OUTLET, FORD FB1000 OR APPROVED EQUAL.
- (C) 1 1/2" HDPE W/ TRACER WIRE.
- (D) 1 1/2" X 1" REDUCER
- (E) 1" BRASS WATER METER SETTER & DOUBLE CHECK ASSY; ANGLE LOCKING BALL VALVE W/ PLAIN METER NUT (NO LIP); FLANGED TUBING W/ PLAIN METER NUT (NO LIP).
- (F) WATER METER SETTER : FORD 18" COIL PIT SETTER, 1", MODEL PFCBHC-488-18-60NL-FP. COVER SHALL BE CAST IRON WITH CUTOUT FOR AUTOMATIC METER READING.
- (G) CAP TO PREVENT DEBRIS FROM ENTERING METER SETTER.

NOTES:

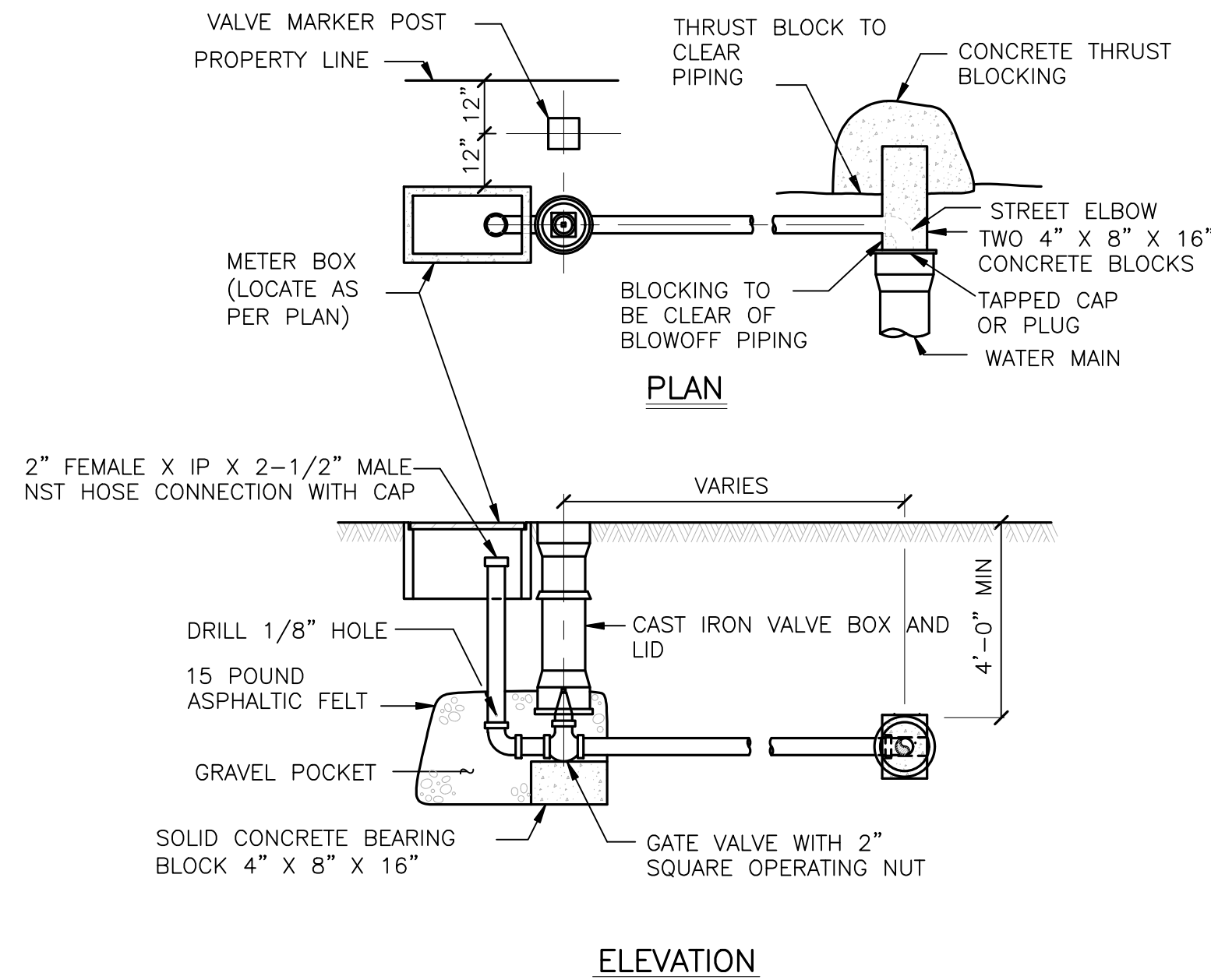
1. SERVICE LINE SHALL BE PERPENDICULAR TO THE WATERMAIN, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. APPROVED BACKFLOW PREVENTION MUST BE INSTALLED WITH IRRIGATION SERVICE PER D.S.H.S. REQUIREMENTS IRRIGATION SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL THE BACKFLOW PREVENTION DEVICE IS APPROVED BY MOUNTAINSTAR RESORT RESOURCES.
3. DEFLECT WATER LATERALS UNDER STORM AS REQUIRED.

(A) 1 1/2" x 1" SINGLE WATER SERVICE
NOT TO SCALE

* NOTE: FOR DOUBLE WATER SERVICES, USE 2" SERVICE LINE.



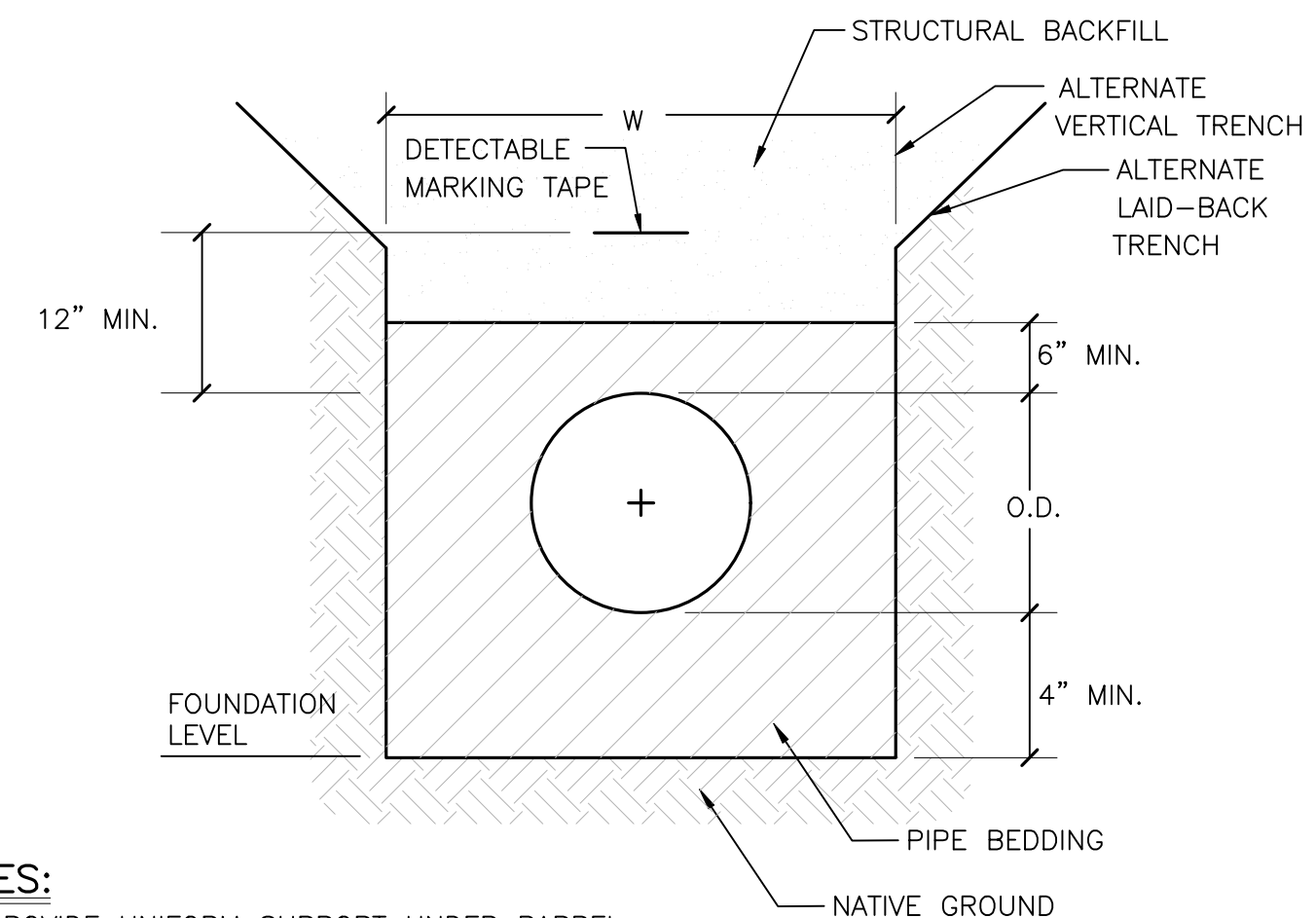
(D) BURIED GATE VALVE
NOT TO SCALE



NOTES:

1. PAINT PIPE THREADS WITH ASPHALT AFTER ASSEMBLY.
2. ALL PIPING TO BE GALVANIZED STEEL.
3. VALVE AND PIPING TO VALVE TO BE 2" UNLESS OTHERWISE NOTED ON PLAN.
4. LOCATE BLOWOFF OUTLET NEAR PROPERTY CORNER IF POSSIBLE.

(B) 2" BLOWOFF ASSEMBLY
NOT TO SCALE



NOTES:

1. PROVIDE UNIFORM SUPPORT UNDER BARREL.
2. HAND TAMP UNDER HAUNCHES.
3. COMPACT BEDDING MATERIAL TO 95% MAXIMUM DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY.
4. REFER TO STANDARD SPECIFICATIONS FOR MAXIMUM TRENCH WIDTH.
5. REFER TO STANDARD SPECIFICATIONS FOR FOUNDATION BEDDING AND BACKFILL MATERIAL REQUIREMENTS.
6. COMPLY WITH ALL SAFETY ORDERS RELATING TO TRENCH CONSTRUCTION.
7. MINIMUM COVER OVER WATER MAINS = 4'-0".

(C) PVC WATER MAIN BEDDING
NOT TO SCALE

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KITITAS COUNTY ENGINEER

DATE

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KITITAS COUNTY

WASHINGTON

NELSON RIDGE
WATER/SEWER DETAILS & NOTES

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24 OF 29 SHEETS

WATER MAIN CONSTRUCTION SPECIFICATIONS

1. WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), WASHINGTON STATE CHAPTER OF THE AMERICAS PUBLIC WORKS ASSOCIATION (APWA), CURRENT EDITION (ENGLISH UNITS.) AND SUNCADIA WATER COMPANY (SWC). MATERIALS SHALL CONFORM TO APWA/WSDOT STANDARD SPECIFICATIONS, SECTION 9-30 WATER DISTRIBUTION MATERIALS, EXCEPT AS MODIFIED HEREIN. CONSTRUCTION SHALL CONFORM WITH THE FOLLOWING SECTIONS OF STANDARD SPECIFICATIONS:
 7-8 GENERAL PIPE INSTALLATION REQUIREMENTS
 7- 9 WATER MAINS
 7-12 VALVES FOR WATER MAINS
 7-13 HYDRANTS
 7-14 SERVICE CONNECTIONS
2. WATER MAIN, HYDRANT, AND SERVICE CONNECTION CONSTRUCTION SHALL BE IN ACCORDANCE WITH WATER MAIN PIPE 4-INCH THROUGH 12-INCH DIAMETER SHALL BE CLASS 150 (DR18), POLYVINYL CHLORIDE (PVC) MEETING THE REQUIREMENTS OF ANSI/AWWA C900. WATER MAIN PIPE LARGER THAN 12-INCH DIAMETER SHALL BE CLASS 165 (DR25), POLYVINYL CHLORIDE (PVC) MEETING THE REQUIREMENTS OF ANSI/AWWA C905. PVC PIPE SHALL HAVE THE SAME OUTSIDE DIMENSIONS AS DUCTILE IRON PIPE. JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D-3139 USING A RESTRAINED RUBBER GASKET CONFORMING TO ASTM F-477. THE MINIMUM DEPTH OF COVER SHALL BE 4- FEET.
3. PVC WATER PIPE UNDER 4-INCH DIAMETER SHALL MEET THE REQUIREMENTS OF ASTM D-2241. PIPE MATERIAL SHALL BE PVC 1120, PVC 1220 OR PVC 2120 AND SHALL HAVE A MINIMUM WALL THICKNESS EQUAL TO OR GREATER THAN A STANDARD DIMENSION RATIO (SDR) OF 21. JOINTS FOR PVC PIPE UNDER 4-INCH DIAMETER SHALL MEET THE REQUIREMENTS OF ASTM D-3139 USING A RESTRAINED RUBBER GASKET MEETING THE REQUIREMENTS OF ASTM F-477.
4. PVC WATER MAINS SHALL HAVE TRACER WIRE INSTALLED DIRECTLY TO THE TOP OF THE WATER MAIN. TRACER WIRE SHALL BE INSTALLED ON THE OUTSIDE OF VALVE BOX UNTIL 6" FROM THE TOP AND THEN ENTER INSIDE.
5. FITTINGS FOR PVC PIPE SHALL BE NEW DUCTILE IRON CONFORMING TO AWWA C-110 OR C-153 AND SHALL BE CEMENT MORTAR LINED CONFORMING TO AWWA C-104. JOINTS SHALL CONFORM TO AWWA C-111.
6. WHERE SPECIFIED ON THE PLANS, JOINT RESTRAINT SHALL BE PROVIDED. JOINT RESTRAINT SHALL BE SERIES 1500 FOR C-900 OR SERIES 2800 DUCTILE IRON RETAINERS FOR C-905 PVC PIPE AS MANUFACTURED BY EBAA IRON OR APPROVED EQUAL. RESTRAINT FOR FITTINGS SHALL BE SERIES 2000 PV DUCTILE IRON MECHANICAL JOINT RESTRAINT GLANDS FOR C-900 OR C-905 PVC PIPE AS MANUFACTURED BY EBAA IRON OR APPROVED EQUAL.
7. THE WATER SERVICE CONNECTION BETWEEN THE METER AND BUILDINGS SHALL BE AWWA C-901, ASTM D-2239 POLYETHYLENE PIPE WITH A 200 PSI RATING, OR COPPER TUBING MEETING THE REQUIREMENTS OF ASTM B88M, TYPE K. FITTINGS FOR COPPER PIPE SHALL BE FLARE TYPE COMPRESSION FITTINGS CONFORMING TO THE REQUIREMENTS OF AWWA C-800.
8. WATER METERS SHALL BE INSTALLED IN THE LOCATIONS SPECIFIED ON THE PLANS PER SWC.
9. METER BOXES SHALL BE LOCATED AS INDICATED ON THE PLANS. METER BOXES SHALL BE FORD OR MUELLER 18"x60" COIL PIT TYPE WITH A CAST IRON LID, OR AS OTHERWISE APPROVED BY SWC. A CUTOUT FOR AN AUTOMATIC METER READING SHALL BE PROVIDED UNLESS THE METER BOX IS LOCATED IN TRAFFIC AREAS, WHICH SHALL BE DESIGNED FOR H-20 LOADING.
10. FIRE HYDRANTS SHALL CONFORM TO AWWA C-502 AND HAVE 5-1/4 - INCH MINIMUM VALVE OPENING, AND PUMPER PORTS AS SPECIFIED BY KITTITAS COUNTY FIRE DISTRICT #7. FIRE HYDRANT SPOOLS SHALL BE DUCTILE IRON CLASS 52 CONFORMING TO AWWA C-151 WITH CEMENT MORTAR LINING CONFORMING TO AWWA C-104. FIRE HYDRANTS SHALL STAND PLUMB AND SET TO THE PROPOSED GRADE. THE LOWEST OUTLET OF THE HYDRANT SHALL BE NO LESS THAN 18-INCHES ABOVE GRADE. HYDRANTS SHALL BE PAINTED YELLOW.
11. ALL GATE VALVES SMALLER THAN 12-INCH DIAMETER SHALL BE RESILIENT WEDGE CONFORMING TO AWWA C-509 OR AWWA C-515. VALVES 12-INCH DIAMETER AND LARGER SHALL BE BUTTERFLY -TYPE CONFORMING TO AWWA C-504, CLASS 150B, SUITABLE FOR DIRECT BURIAL.
12. COMBINATION AIR VALVES SHALL BE SERIES 140 C AS MANUFACTURED BY THE APCO CORPORATION MEETING THE REQUIREMENTS OF AWWA C-512. COMBINATION VALVE SHALL BE LOCATED IN A METER BOX. A BRONZE GATE VALVE SHALL ISOLATE THE COMBINATION AIR VALVE FROM THE WATER MAIN. A 2-INCH DIAMETER GALVANIZED IRON PIPE SHALL DAYLIGHT WITH A 180-DEGREE BEND AND BEEHIVE STRAINER.
13. PRESSURE REDUCING STATIONS SHALL BE AS FABRICATED AND ASSEMBLED BY CIMCO-GC SYSTEMS, INC., OR APPROVED EQUAL.
14. VALVE BOXES SHALL BE INSTALLED ON ALL BURIED VALVES. THE BOX SHALL BE CAST IRON, TWO-PIECE SLIP DESIGN WITH A BASE CORRESPONDING TO THE SIZE OF THE VALVE. THE COVER SHALL HAVE THE WORD "WATER" CAST IN IT AND THE LID "EARS" SHALL BE INSTALLED PARALLEL TO THE MAIN. VALVE BOX SHALL BE OLYMPIC FOUNDRY PART NO. VB1 OR APPROVED EQUAL. VALVE BOX TABS SHALL POINT IN THE DIRECTION OF THE PIPE. VALVE BOX SHALL BE ENCASED WITH 6" CONCRETE COLLAR POURED AT SUBGRADE.
15. CONCRETE THRUST BLOCKING SHALL BE PER WSDOT/APWA AND SHALL UTILIZE 3000 PSI CONCRETE.
16. THE LOCATION OF WATER STUBS AT THE PROPERTY LINE SHALL BE MARKED BY THE CONTRACTOR WITH A 2 BY 4-INCH PRESSURE TREATED WOODEN STAKE 4 FEET LONG BURIED IN THE GROUND A DEPTH OF 3 FEET. THE LOW END SHALL HAVE A 2 BY 4-INCH CLEAT NAILED TO IT TO PREVENT WITHDRAWAL OF THE STAKE. THE EXPOSED END SHALL BE PAINTED BLUE AND THE DEPTH TO THE WATER STUB SHALL BE INDICATED IN BLACK PAINT ON THE 2 BY 4. IN ADDITION, A LENGTH OF 12-GAGE GALVANIZED WIRE SHALL BE PROVIDED TO EXTEND FROM THE PLUGGED END OF THE WATER STUB. THE UPPER END SHALL EMERGE AT THE 4-FOOT STAKE, BUT SHALL NOT BE FASTENED TO IT.
17. PRIOR TO CONNECTION WITH EXISTING MAINS, ALL NEW WATER MAINS AND HYDRANTS SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH SECTION 7-09.3(24). PRESSURE TESTING AND DISINFECTION SHALL BE PERFORMED IN THE PRESENCE OF SWC OR SEC INSPECTOR. THE CONTRACTOR SHALL PROVIDE PLUGS, PORTABLE PUMP, BLOW OFF ASSEMBLIES, TEMPORARY BLOCKING, AND OTHER EQUIPMENT AND MATERIALS NECESSARY FOR PRESSURE TESTING AND DISINFECTION.
18. BLOW OFF ASSEMBLIES SHALL BE A MINIMUM OF 2.5- FEET DEEP TO BE ADEQUATELY INSULATED WITH A VALVE BOX.
19. BLOW OFF AND FLUSHING STATIONS SHALL NOT BE PVC AND SHALL TERMINATE WITH 2.5-INCH MALE FIRE HOSE NST AND CAP.
20. THE NEW CONNECTION TO THE EXISTING MAIN SHALL BE PERFORMED IN THE PRESENCE OF A SWC OR SEC INSPECTOR.
21. MINIMUM TEST PRESSURE IS 225 PSI.

GRAVITY SANITARY SEWER CONSTRUCTION SPECIFICATIONS

1. GRAVITY SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) AND WASHINGTON STATE CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA), CURRENT EDITION, (ENGLISH UNITS), AND SUNCADIA ENVIRONMENTAL COMPANY (SEC). CONSTRUCTION SHALL CONFORM WITH THE FOLLOWING SECTIONS OF THE STANDARD SPECIFICATIONS.
 7-05 MANHOLES, INLETS, CATCH BASINS AND DRY WELLS.
 7-08 GENERAL PIPE INSTALLATION REQUIREMENTS
 7-17 SANITARY SEWERS
 7-18 SIDE SEWERS
 7-19 SEWER CLEANOUTS
2. ALL SEWER PIPE SHALL BE PVC CONFORMING TO ASTM D-3034, SDR 35 FOR PIPE SIZES 4" TO 15". PVC PIPE SIZED 18" TO 27" SHALL MEET THE REQUIREMENTS OF ASTM F-679. PIPE JOINTS SHALL CONFORM TO ASTM D-3212 AND SHALL HAVE FACTORY INSTALLED RUBBER GASKETS MEETING REQUIREMENTS OF ASTM F-477. PVC PIPE FITTINGS SHALL MEET REQUIREMENTS OF ASTM D-3034 AND ASTM D-3212.
3. BEDDING FOR PVC PIPE SHALL CONFORM TO BEDDING MATERIAL PER SECTION 9-03.12(3).
4. SEWER STUBS SHALL HAVE TRACER WIRE INSTALLED. THE TRACER WIRE SHALL EXIT THE GROUND AT THE BASE OF THE 4X4 PRESSURE TREATED MARKER WITH AN EXTRA 3 FEET WRAPPED AROUND THE BASE OF THE MARKER.
5. BACKFILL MATERIAL SHALL BE BANK RUN GRAVEL FOR TRENCH BACKFILL PER SECTION 9-03.19OF THE WSDOT/APWA OR WITH THE APPROVAL OF THE PROJECT GEOTECHNICAL ENGINEER, NATIVE MATERIAL OF SIMILAR CHARACTERISTICS TO BANK RUN GRAVEL FOR TRENCH BACKFILL.
6. PRECAST CONCRETE MANHOLES SHALL MEET THE REQUIREMENTS OF AASHTO M-199.
7. CASTINGS FOR MANHOLE RINGS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF AASHTO M-105, GRADE 30B. CONTRACTOR SHALL PROVIDE PRO-STIK BUTYL SEALANT OR APPROVED EQUAL BETWEEN ALL MANHOLE RISER RINGS. COVERS SHALL BE CENTERED TO THE STRUCTURE AND SHALL BE DUCTILE IRON CONFORMING TO ASTM A-536, GRADE 80-55-06. MANHOLE RISER SHALL BE ENCASED WITH 6" CONCRETE COLLAR POURED AT SUBGRADE.
8. MANHOLE STEPS SHALL BE CONSTRUCTED TO MEET REQUIREMENTS OF ASTM C-478, BE RATED FOR A MINIMUM OF 300-FOOT-POUND CONCENTRATED LOAD AND MEET THE LATEST OSHA REQUIREMENTS. ACCESS STEPS SHALL BE 12-INCHES APART MAXIMUM AND THE LAST STEP SHALL BE 12-INCHES FROM THE CHANNEL. A CO-POLYMER POLYPROPYLENE STEEL REINFORCED STEP WITH A MINIMUM HALF INCH DIAMETER BAR FULLY ENCLOSED ON THE CO-POLYMER SHALL BE USED.
9. FLOW CHANNELS IN MANHOLES SHALL BE SHAPED AND SLOPED TO PROVIDE A SMOOTH TRANSITION BETWEEN THE INLET AND OUTLET SEWER LINES AND MINIMIZE TURBULENCE.
10. RIGID PIPE CONNECTIONS TO CONCRETE MANHOLES SHALL BE MADE WITH A FLEXIBLE JOINT, KOR-N-SEAL OR APPROVED EQUAL, AT A DISTANCE FROM THE FACE OF THE MANHOLE NOT MORE THAN 1.5 TIMES THE NOMINAL PIPE DIAMETER OR 18 INCHES, WHICHEVER IS GREATER.
11. PVC MANHOLE ADAPTERS SHALL BE MANUFACTURED BY GPK PRODUCTS, INC. (OR EQUIVALENT) WITH ABRASIVE SILICA EXTERIOR LAYER. THE MANHOLE ADAPTER WILL BE GROUTED WITH QUIKRETE MORTAR MIX OR EQUIVALENT. MANHOLE ADAPTERS SHALL BE WATERTIGHT TO 6.5 PSI (MINIMUM).
12. THE LOCATION OF SIDE SEWERS AT THE PROPERTY LINE SHALL BE MARKED BY THE CONTRACTOR WITH A 4 BY 4-INCH PRESSURE TREATED WOODEN STAKE THAT EXTENDS DOWN TO THE CAPPED END OF THE PIPE WITH 4 FEET EXPOSED. THE LOW END SHALL HAVE A 2 BY 4-INCH CLEAT NAILED TO IT TO PREVENT WITHDRAWAL OF THE STAKE. THE EXPOSED END SHALL BE PAINTED GREEN AND THE DEPTH TO THE SIDE SEWER OR TEE SHALL BE INDICATED IN BLACK PAINT ON THE 4 BY 4.
13. NEW CONNECTIONS TO EXISTING FACILITIES SHALL BE SEALED OFF UNTIL UPSTREAM CONSTRUCTION IS FINISHED, CLEANED, AND ACCEPTED. ALL CONSTRUCTION DEBRIS AND WATER SHALL BE REMOVED PRIOR TO OPENING THE SEAL. THE NEW CONNECTION TO THE EXISTING MAIN SHALL BE PERFORMED IN THE PRESENCE OF A SWC OR SEC INSPECTOR.
14. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL FLUSH THE SYSTEM AT A SUFFICIENT VELOCITY TO REMOVE ANY DEBRIS FROM THE PIPE.
15. PRESSURE TESTING AND TV INSPECTION OF GRAVITY SEWER PIPES SHALL BE PERFORMED BY THE CONTRACTOR AS PER WSDOT/APWA SPECIFICATIONS. TESTING AND INSPECTION SHALL BE PERFORMED IN THE PRESENCE OF SEC INSPECTOR.
16. UTILITY CONTRACTOR TO INSTALL SANITARY SEWER SIDE SEWER LINES A MINIMUM OF 5 FEET BEYOND ROAD RIGHT-OF-WAY INTO PRIVATE PROPERTY.

LOW PRESSURE SANITARY SEWER CONSTRUCTION SPECIFICATIONS

1. PRESSURE SEWER LINES SHALL BE CONSTRUCTED OF HIGH-DENSITY POLYETHYLENE PIPE CONFORMING WITH ASTM-D-2737, SDR 11 WITH A WORKING PRESSURE OF 150 PSI.
2. CONTRACTOR SHALL STUB-OUT PRESSURE SEWER LATERALS FIVE FEET FROM ROAD RIGHT-OF-WAY. LATERAL ASSEMBLY SHALL CONSIST OF A 1.25-INCH CURB STOP, PACK JOINTS AND ADAPTERS, CHECK VALVE AND COUPLINGS. THE LATERAL ASSEMBLY SHALL BE MARKED ON THE SURFACE WITH A 2-INCH X 4-INCH STUD.
3. LOW PRESSURE SEWER PIPES UNDER 4-INCHES SHALL BE HDPE WITH WELDED JOINTS OR APPROVED EQUAL.
4. LOW PRESSURE SIDE SEWER PIPES SHALL BE 2-INCH HDPE WELDED WITH BRASS OR STAINLESS ¼ TURN VALVE OR APPROVED EQUAL.
5. LOW-PRESSURE SEWER CHECK-VALVES SHALL BE SELECTED FROM SEWER MANUFACTURERS.
6. LOW PRESSURE SEWER VALVES LOCATED IN DRIVEWAYS SHALL HAVE A VALVE BOX DESIGNED FOR H-20 LOADING.
7. PRESSURE SEWER AND MAINS SHALL HAVE TRACER WIRE INSTALLED DIRECTLY TO THE TOP OF THE PRESSURE SEWER PIPE.
8. BEDDING AND BACKFILL FOR PRESSURE SEWER SHALL BE AS SPECIFIED FOR GRAVITY SEWERS.

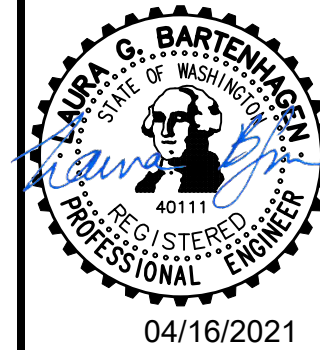
SANITARY SEWER FORCE MAIN CONSTRUCTION SPECIFICATIONS

1. SANITARY SEWER FORCE MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WATER MAIN CONSTRUCTION SPECIFICATIONS, EXCEPT THAT DISINFECTION REQUIREMENTS DO NOT APPLY.
2. FORCE MAINS SHALL BE PVC PRESSURE PIPE CONFORMING WITH AWWA C-900 AS SPECIFIED IN SECTION 9-30.1(5)A OF THE STANDARD SPECIFICATIONS.
3. PRESSURE SEWER AND MAINS SHALL HAVE TRACER WIRE INSTALLED NEAR THE SURFACE DIRECTLY ABOVE THE PRESSURE SEWER PIPE.

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____	DATE _____
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REVISIONS		
NO.	DESCRIPTION/DATE	BY



04/16/2021

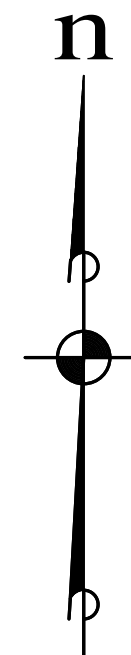
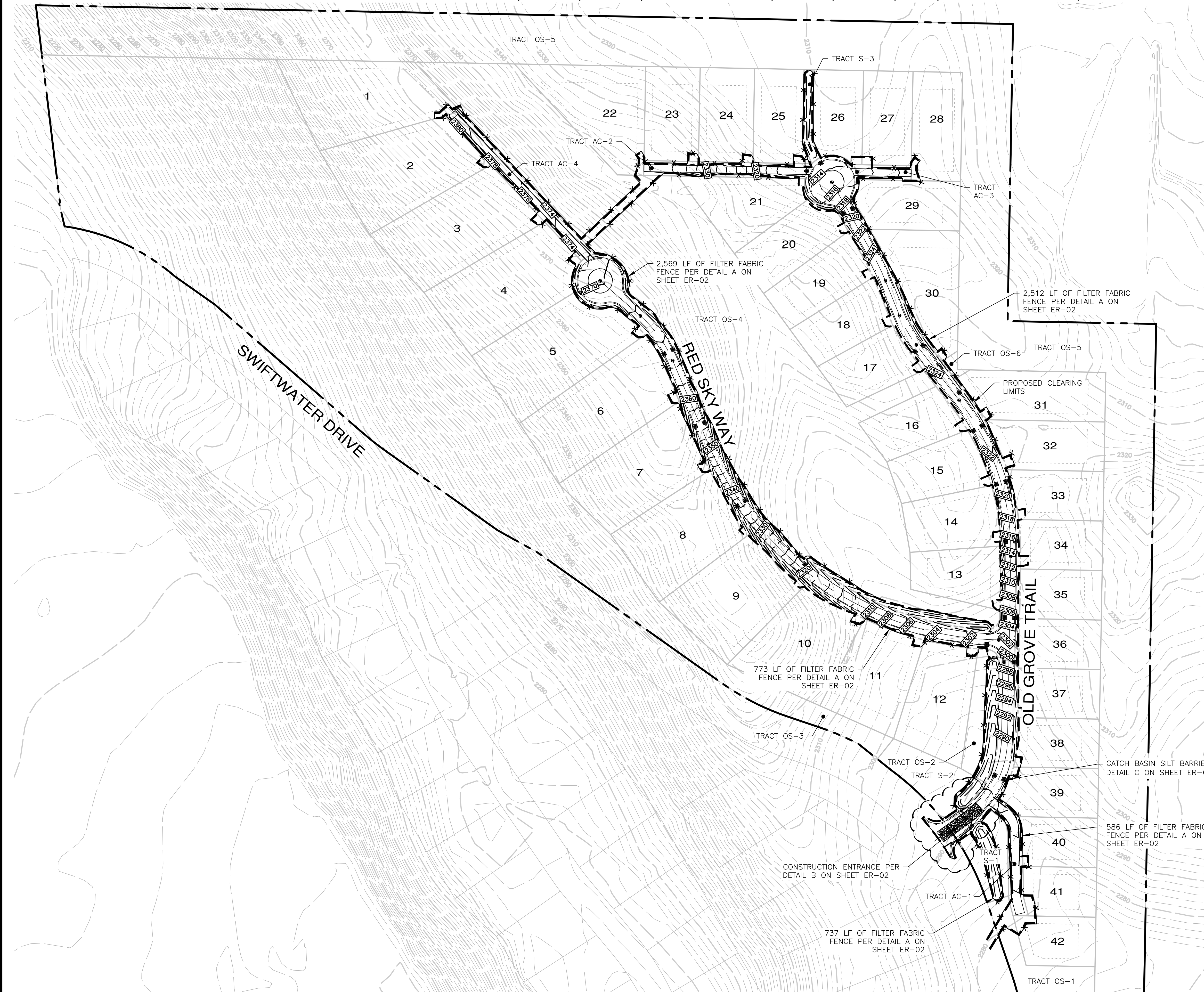
ESM CONSULTING ENGINEERS
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 Federal Way, WA 98003
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 Civil Engineering Public Works | Land Surveying Project Management | Land Planning Landscape Architecture

NEW SUNCADIA, LLC
NELSON RIDGE
 WATER/SEWER DETAILS & NOTES
 KITTITAS COUNTY WASHINGTON

JOB NO.:	998-812-020
DWG. NAME:	DT-07
DESIGNED BY:	LGB
DRAWN BY:	JJH
CHECKED BY:	
DATE:	04/16/2021
DATE OF PRINT:	

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 Plotted By: Greg Fabore

A PORTION OF SECTION 13, T. 20 N., R. 14 E., AND SECTION 18, T. 20 N., R. 15 E., W.M., KITTITAS COUNTY, WASHINGTON



SCALE: 1" = 100'
 100 50 0 100 200
 CONTOUR INTERVAL = 2'

NOTES:
 DIVISION 6 CLEARING LIMIT AREA = 4.13 AC

LEGEND

- DAYLIGHT LINE
- PROP. CLEARING LIMITS
- - - - - EXISTING CONTOUR
- 2262 --- PROPOSED CONTOUR
- CATCH BASIN SILT BARRIER
- * - * - * - FILTER FABRIC FENCE

APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____ DATE _____

REVISIONS		
NO.	DESCRIPTION/DATE	BY

05/13/2021

ESM CONSULTING ENGINEERS, LLC
 505 S. SUNSET BLVD. SUITE 205
 FEDERAL WAY, WA 98003
 FEDERAL WAY (253) 838-6113
 EVERETT (425) 251-9900
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REGISTERED PROFESSIONAL ENGINEER
 40111
 STATE OF WASHINGTON

Land Surveying
 Project Management
 Land Planning
 Landscape Architecture

NEW SUNCADIA, LLC
NELSON RIDGE
 CLEARING & T.E.S.C. PLAN

WASHINGTON
 KITTITAS COUNTY

JOB NO.: 998-812-020
 DWG. NAME: ER-01
 DESIGNED BY: LGB
 DRAWN BY: JH
 CHECKED BY:
 DATE: 05/13/2021
 DATE OF PRINT:

ER-01
 27 OF 29 SHEETS

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ENGINEER'S STANDARD NOTES

CONSTRUCTION SEQUENCE

- CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL AN ACCIDENTAL SPILL CONTROL AND CLEANUP PLAN.
- CONTACT THE KITTITAS COUNTY DEPARTMENT OF PUBLIC WORKS AND SCHEDULE A PRECONSTRUCTION MEETING.
- INSTALL FILTER FABRIC FENCE, CHECK DAMS, INTERCEPTOR SWALES, STRAW BALE BARRIERS, SEDIMENT TRAPS AND OTHER TESC MEASURES AS SPECIFIED IN THE DETAILS OR AS FIELD CONDITIONS DICTATE.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCE(S). (IF NECESSARY)
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INCORPORATE THE NECESSARY EROSION CONTROL MEASURES SHOWN ON THESE PLANS FOR THE SPECIFIC SITE AREA CONDITIONS.
- CONTROL DUST BY USE OF WATER TRUCKS ON ROADS AND EXPOSED AREAS AS NECESSARY. IF WATER FOR CONSTRUCTION PURPOSED IS OBTAINED FROM A HYDRANT, CONTRACTOR TO INSTALL A TEMPORARY METER W/ BACKFLOW PREVENTER. IF FLOCCULANT AGENTS ARE USED (PAM), FOLLOW THE MANUFACTURER'S GUIDELINES FOR APPLICATION RATES.
- PARTICULAR ATTENTION SHALL BE PAID TO THE LOESS MATERIALS PRESENT ON THE SITE.
- CONTRACTOR SHALL HAVE STREET SWEEPING EQUIPMENT AVAILABLE AND SHALL USE AS CONDITIONS DICTATE.
- DURING THE CONSTRUCTION PERIOD, ANY AND ALL POLLUTANTS INCLUDING SEDIMENTS SHALL BE HANDLED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE CONTAMINATION OF STORMWATER.
- LANDSCAPE OR SEED ALL EXPOSED AREAS AFTER CONSTRUCTION.
- DURING THE CLEARING OPERATIONS IMPLEMENTATION OF THE EROSION CONTROL MEASURES DETAILED IN THESE PLANS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE BASED ON AREA CLEARED AND WEATHER CONDITIONS.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THEY ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON-SITE. DISTURBED AREAS RESULTING FROM SEDIMENT REMOVAL SHALL BE PERMANENTLY STABILIZED.
- COLLECTED AND TREATED RUNOFF SHALL BE EITHER INFILTRATED OR, WHERE FEASIBLE, DISCHARGED IN A DISPERSED MANNER SUCH THAT SOIL EROSION DOES NOT OCCUR.
- DEVELOP TESC INSPECTION CHECKLIST FOR USE IN WEEKLY INSPECTIONS. PROVIDE MONTHLY REPORT TO OWNER ON INSPECTIONS AND MAINTENANCE/UPGRADE ACTIVITIES.

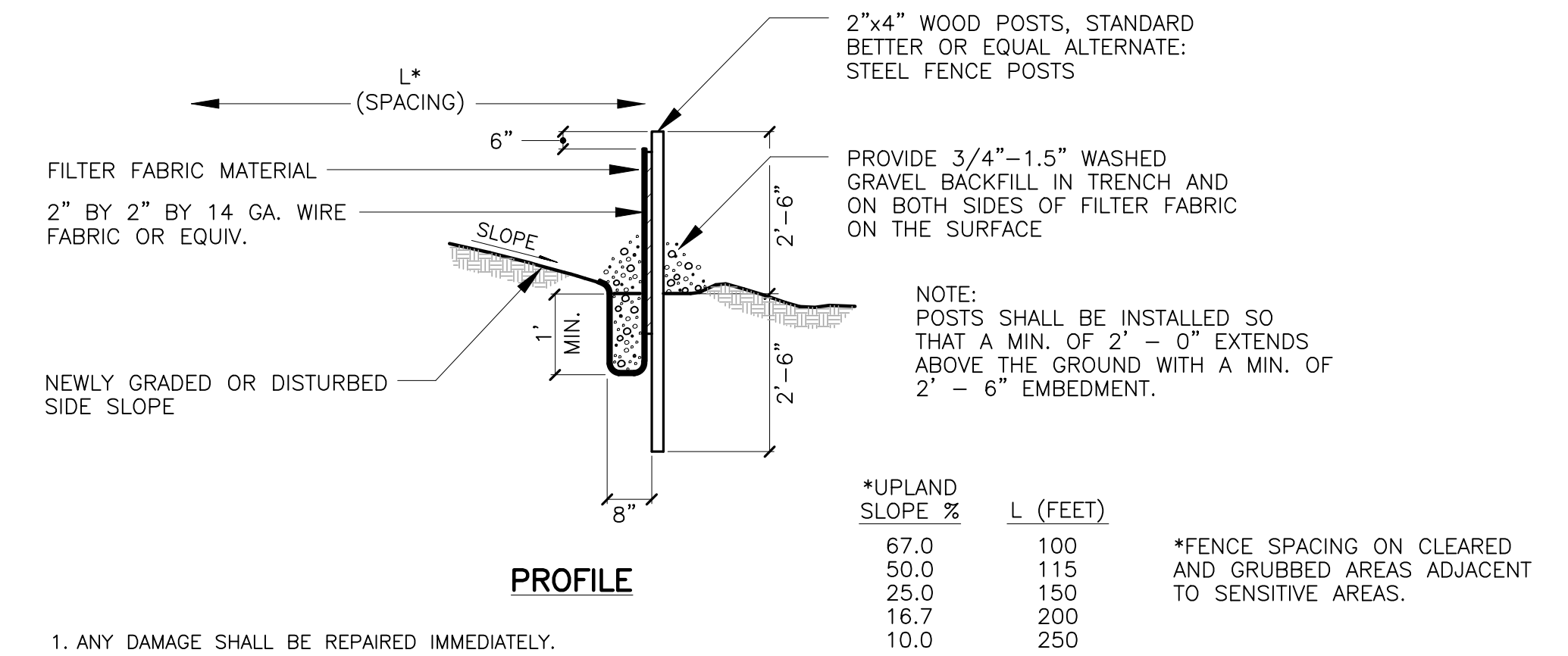
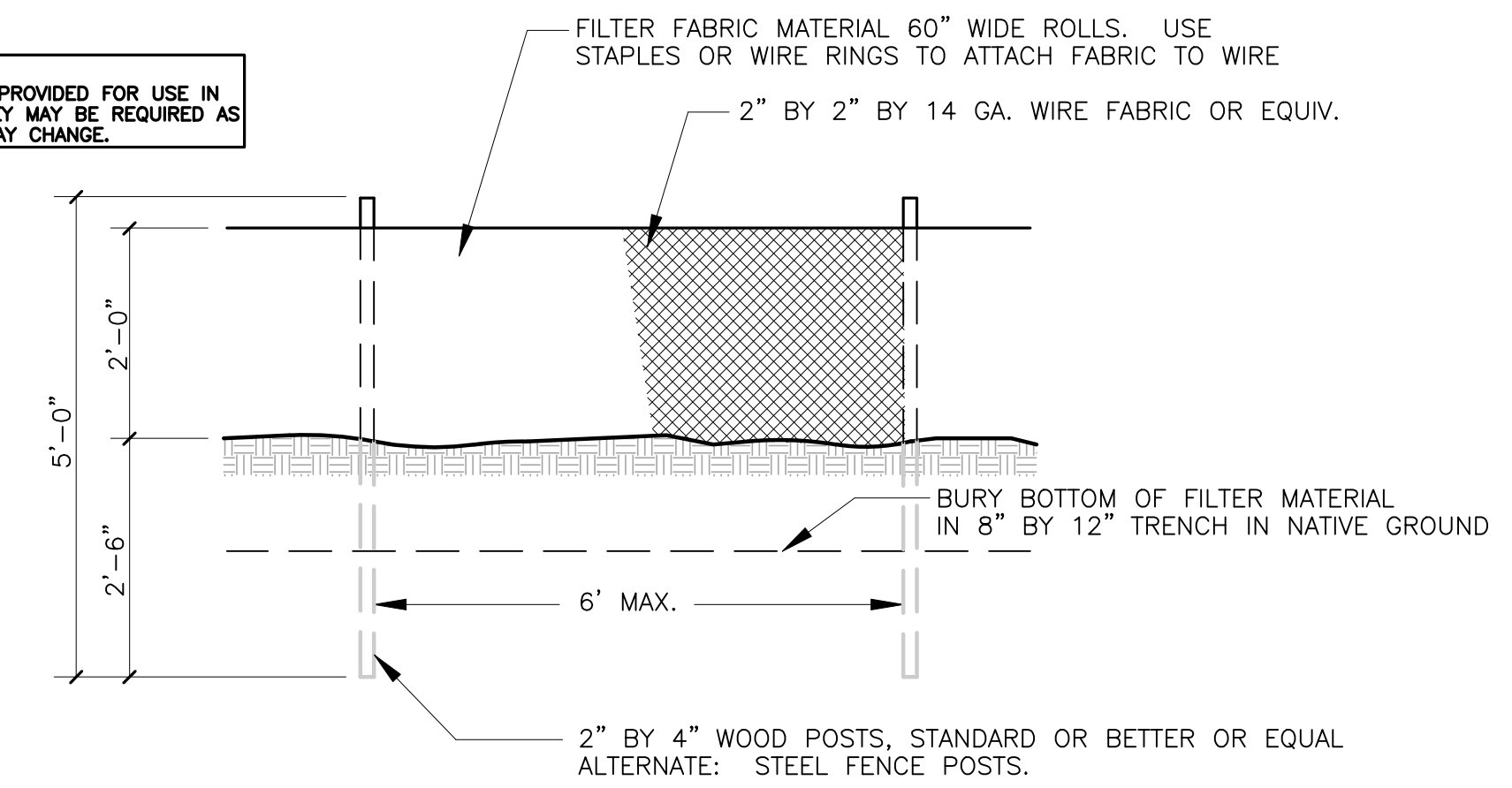
EROSION/SEDIMENTATION CONTROL SPECIFICATIONS

- AGENCY APPROVAL OF THIS TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. UTILITIES, ETC.) SEPARATE PERMITS ARE REQUIRED FOR BUILDING AND UTILITIES CONSTRUCTION.
- THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. IMPLEMENTATION OF THESE TESC PLANS AND CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES AS NECESSARY TO PREVENT SEDIMENTATION OR SILTATION OF ON-SITE AND OFF-SITE DRAINAGE FEATURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED. THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR ASSISTANCE SHOULD THE NEED ARISE.
- THE BOUNDARIES OF THE CLEARING LIMITS, BOTH INTERIOR AND EXTERIOR, SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL LIMIT CLEARING TO THOSE AREAS NECESSARY FOR THE CURRENT OPERATION.
- AS CONSTRUCTION PROGRESSES THE CONTRACTOR SHALL PHASE IMPLEMENTATION OF THE TESC MEASURES SHOWN ON THESE PLANS AS CLEARING AND GRADING ACTIVITIES ALLOW. PHASING OF TESC MEASURES SHALL BE PERFORMED IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT VIOLATE STATE WATER QUALITY STANDARDS. THE CONSTRUCTION SEQUENCE PROVIDED ON THESE PLANS SHALL SERVE AS GENERAL GUIDANCE IN THE DEVELOPMENT OF THE OPERATIONAL PHASING PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP THE OPERATIONAL PHASING PLAN AND TO ENSURE THAT SEDIMENTATION AND SILTATION OF ON-SITE AND OFF-SITE DRAINAGE FEATURES DOES NOT OCCUR.
- THE TESC FACILITIES SHALL BE INSPECTED WEEKLY BY THE CONTRACTOR AND MAINTAINED/UPGRADED AS NECESSARY.
- ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR AN EXTENDED PERIOD OF TIME, SHALL BE STABILIZED WITH AN APPROVED TESC METHOD (E.G. SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.) SEEDING SHALL BE PERFORMED IN A MANNER TIMELY TO GERMINATION OF SEED BY SITE RAINFALL.
- ANY AREA NEEDING TESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED PRIOR TO RAINFALL EVENTS. THERE MAY BE AREAS NOT SHOWN ON TH EPLANS THAT WILL REQUIRE TESC MEASURES PRIOR TO A A RAINFALL EVENT, SUCH AS ADDITIONAL CLEARING, CUTS AND FILLS, ETC. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER FOR IMPLEMENTAION OF THE ADDITIONAL TESC MEASURES.
- THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT.
- STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT. (RCW 46.61.655).
- DURING THE TIME PERIOD OF NOVEMBER 1 THROUGH FEBRUARY 28, NO CLEARING OR GRADING SHALL OCCUR IN AREAS OF HIGH EROSION POTENTIAL AS DEFINED IN THE PROJECT EIS.
- CLEAN WATER ENTERING CONSTRUCTION AREA SHALL NOT BE ALLOWED TO MIX WITH CONSTRUCTION AREA RUNOFF.
- TEMPORARY AND PERMANENT COVER OF EXPOSED SOILS AND MAJOR STOCKPILES OF ERODIBLE SOIL IS REQUIRED.
- CONTRACTOR SHALL ESTABLISH SILT FENCES ALONG BOUNDARIES OF SENSITIVE AREAS AS REQUIRED FOR THEIR PROTECTION. SENSITIVE AREAS SHALL BE AS DEFINED IN THE PROJECT EIS.
- WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT A RATE OF 20 LB/ACRE ACCORDING TO THE FOLLOWING SEED MIXTURE:

NAME	PROPORTION PERCENT BY WEIGHT	PERCENT PURITY	PERCENT GERMINATION
BASIC SEED MIX @ 20 LB/ACRE			
CREeping RED FESCUE	23	98	90
SHEEP FESCUE	23	98	90
CANADA BLUEGRASS	24	98	90
RED TOP	10	98	90
SHERMAN BIG BLUE	20	98	90

- THE CONTRACTOR SHALL ADJUST HIS EROSION CONTROL OPERATIONS ACCORDING TO THE FIELD CONDITIONS TO ENSURE ANY SEDIMENT LADEN WATER DOES NOT ENTER OFFSITE OR SURFACE WATER SYSTEMS.

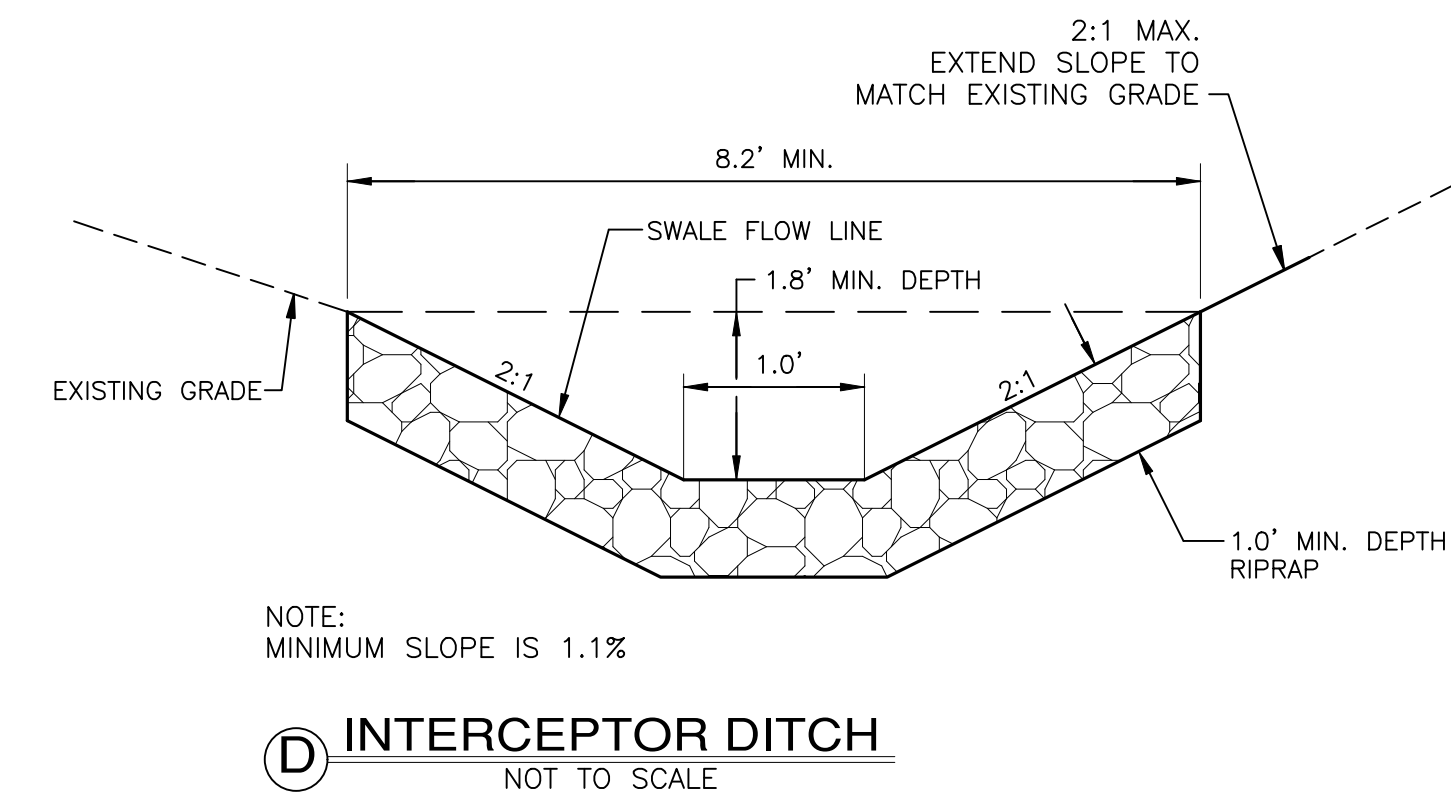
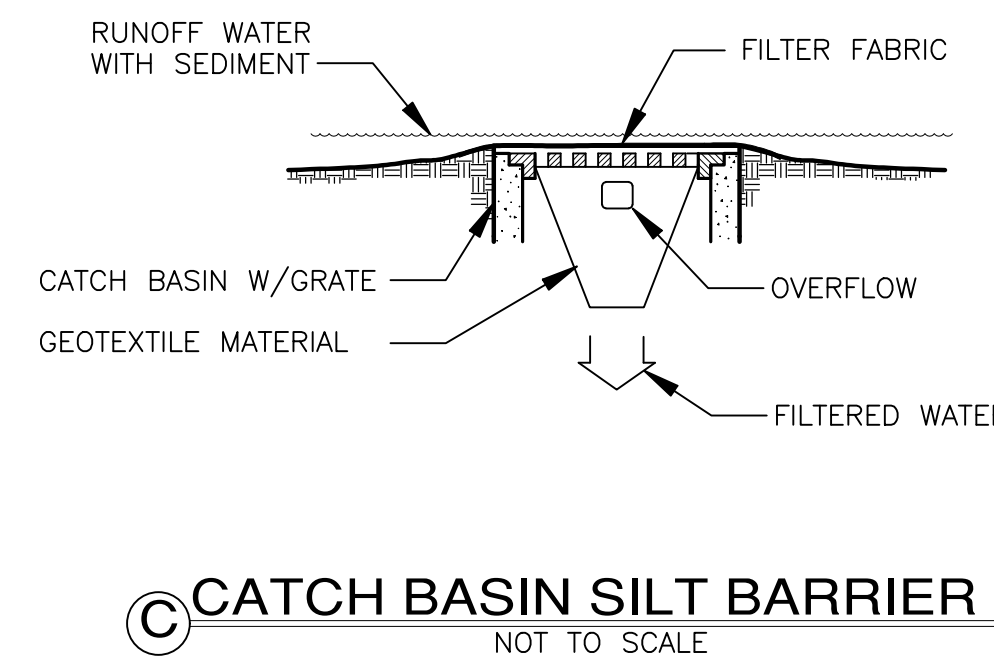
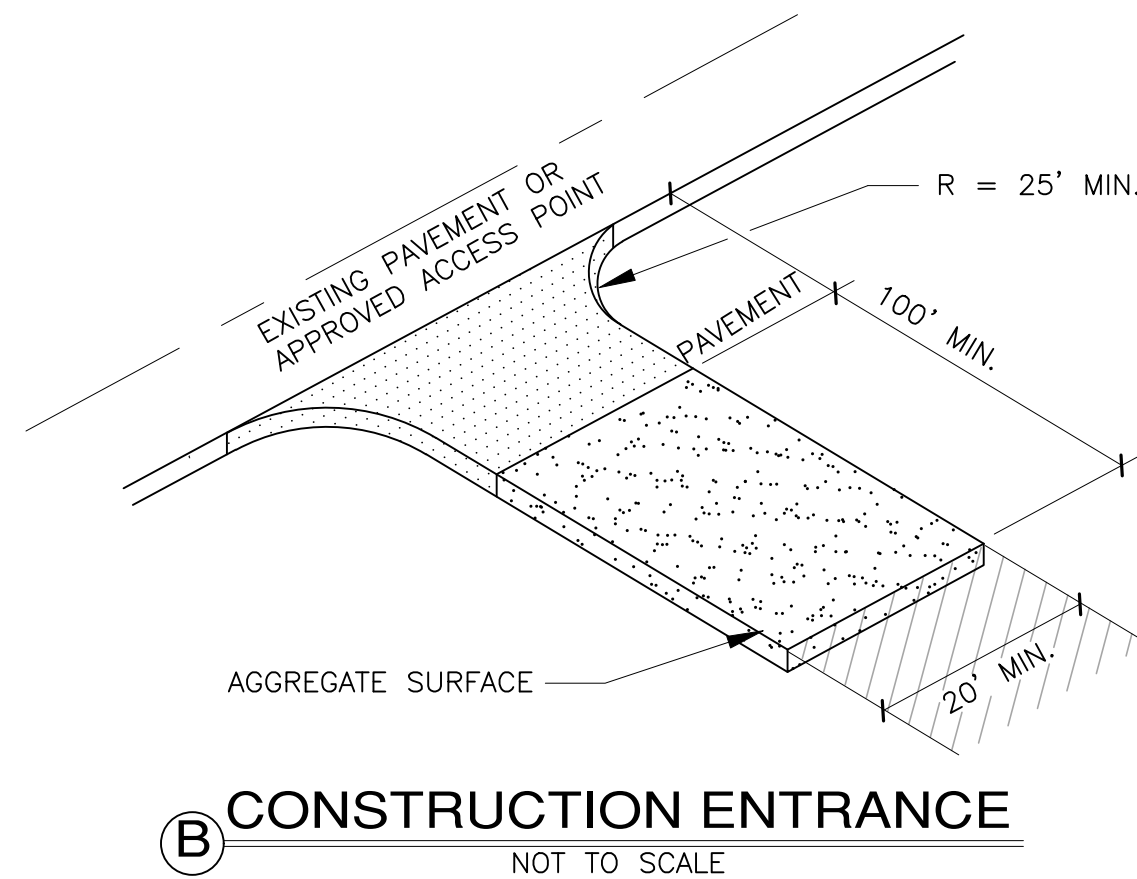
NOTE: THESE DETAILS ARE PROVIDED FOR USE IN THE EVENT THAT THEY MAY BE REQUIRED AS FIELD CONDITIONS MAY CHANGE.



- ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
- IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR 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 FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE AND/OR REMOVE THE TRAPPED SEDIMENT.
- SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6" HIGH.
- IF THE FILTER FABRIC HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

A TYPICAL FILTER FENCE DETAIL
NOT TO SCALE

CONDITIONS FOR USE:
TO PREVENT OFF-SITE SEDIMENT TRANSPORT TO SENSITIVE AREAS FROM CLEARED AND GRUBBED AREAS.



APPROVED FOR CONSTRUCTION

KITTITAS COUNTY ENGINEER _____ DATE _____

REVISIONS	
NO.	DESCRIPTION/DATE

40111 REGISTERED PROFESSIONAL ENGINEER
04/16/2021

NEW SUNCADIA, LLC
CONSULTING ENGINEERS
505 W. MAIN ST. SUITE 205
FEDERAL WAY, WA 98003
www.esmcivil.com

FEDERAL WAY WA 98003
(206) 838-6113
(206) 297-9900

Civil Engineering
Public Works
Land Surveying
Project Management
Land Planning
Landscape Architecture

WASHINGTON

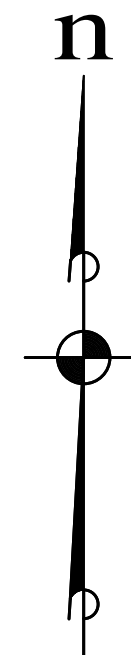
NEW SUNCADIA, LLC
NELSON RIDGE
CLEARING & T.E.S.C. DETAILS & NOTES
KITTITAS COUNTY

JOB NO.: 998-812-020
DWG. NAME: ER-02
DESIGNED BY: LGB
DRAWN BY: JHJ
CHECKED BY:
DATE: 04/16/2021
DATE OF PRINT:

ER-02
28 OF 29 SHEETS

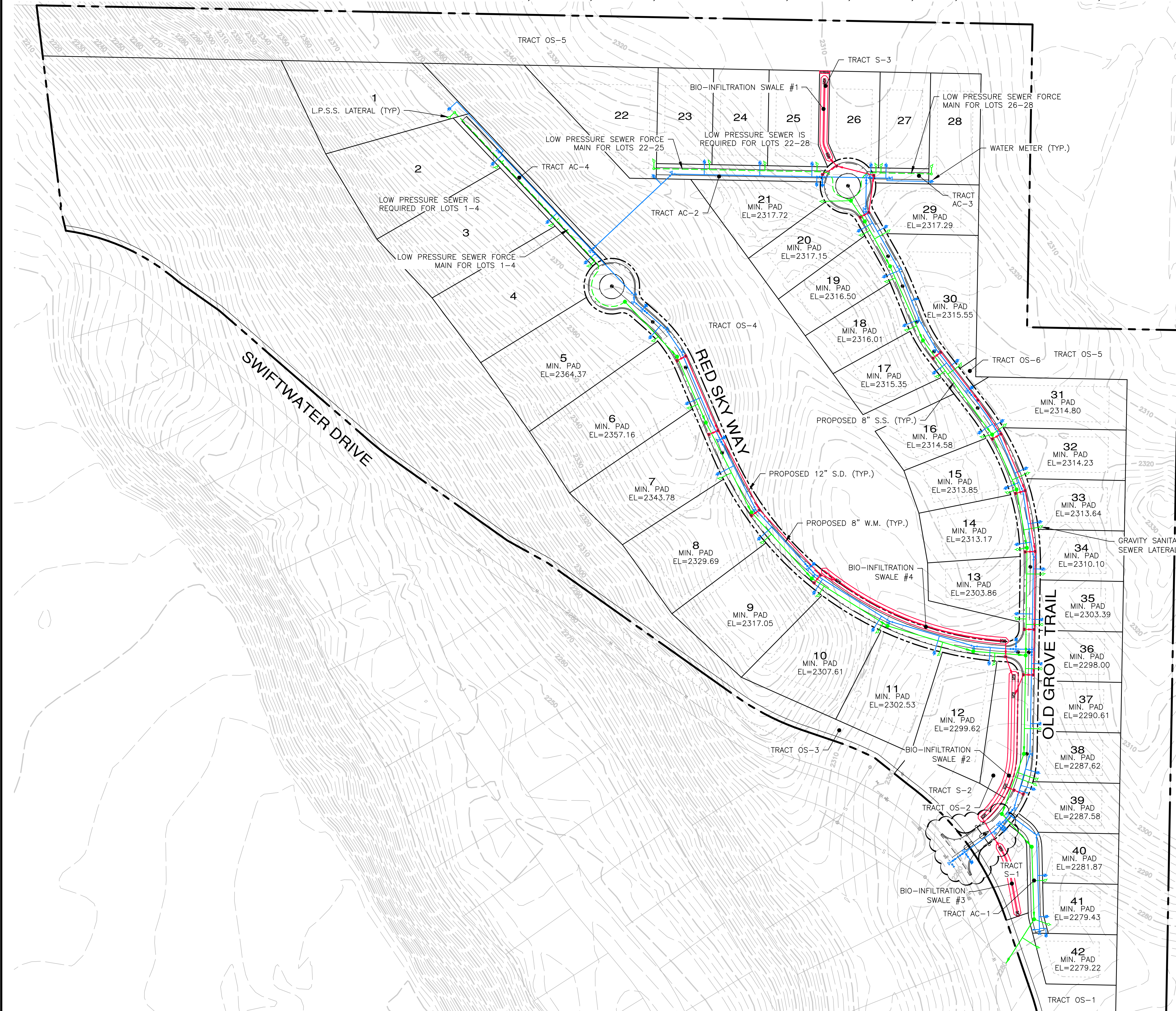
File: \\server1\ENGR\ESM-JDBS\998\812\020\plots\ER-02.dwg
Plotted: 4/14/2021 7:48 AM
Plotted By: Greg Felsore

A PORTION OF SECTION 13, T. 20 N., R. 14 E., AND SECTION 18, T. 20 N., R. 15 E., W.M., KITTITAS COUNTY, WASHINGTON



SCALE: 1" = 100'
 100 50 0 100 200
 CONTOUR INTERVAL = 2'

- LEGEND**
- STORM DRAINAGE
 - SANITARY SEWER MAIN
 - LOW PRESSURE SEWER FORCE MAIN
 - WATER MAIN
 - WATER METER
 - FIRE HYDRANT
 - > STORM DRAINAGE FLOW PATH
 - SANITARY SEWER CLEANOUT
 - CATCH BASIN
 - SANITARY SEWER MANHOLE
 - - - EX. SANITARY SEWER FORCE MAIN
 - EX. SANITARY SEWER MAIN
 - - - -2056- EXISTING MINOR CONTOUR
 - - - -2060- EXISTING MAJOR CONTOUR



REVISIONS		
NO.	DESCRIPTION/DATE	BY

05/13/2021
 CONSULTING ENGINEERS LLC
 40111
 FEDERAL WAY
 FEDERAL WAY, WA 98003
 www.esmcivil.com
 Civil Engineering
 Public Works
 Land Surveying
 Project Management
 Land Planning
 Landscape Architecture

NEW SUNCADIA, LLC
NELSON RIDGE
 COMPOSITE UTILITY PLAN
 WASHINGTON
 KITTITAS COUNTY
 JOB NO.: 998-812-020
 DWG. NAME: UT-01
 DESIGNED BY: LGB
 DRAWN BY: JH
 CHECKED BY:
 DATE: 05/13/2021
 DATE OF PRINT:
 APPROVED FOR CONSTRUCTION
 KITTITAS COUNTY ENGINEER _____ DATE _____
 UT-01
 29 OF 29 SHEETS

File: \\server\ENR\ESM\Jobs\998\812\020\plots\UT-01.dwg
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 Plotted By: Greg Feltore