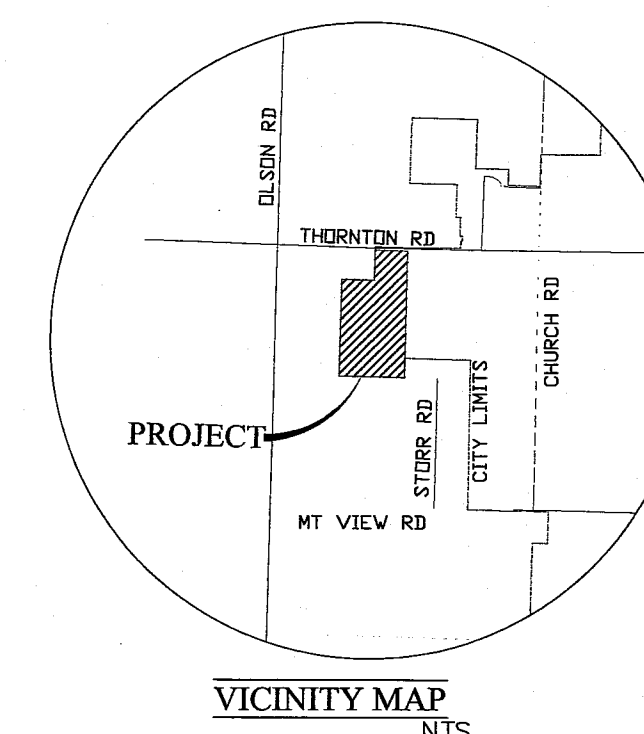


THE MEADOWS

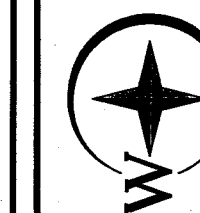
PHASE II

ENGINEER:
WEDEN ENGINEERING, LLC
2636 NUBGAARD RD
FERNDALE, WA 98248



WEDEN ENGINEERING, LLC
Civil Engineering • Planning • Project Management

2636 Nubigaard Rd. Ferndale, WA 98248
(360) 380-1363 (360) 384-3615 Fax
email: info@wedeneengineering.com



APPROVED
DEC 12 2016
CITY OF BOSTON

No.	REVISIONS / SUBMISSIONS	DATE
	AS-BUILT INFORMATION	11/30/15
4	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
2	REVISED LOT 72-80 & 86-107	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15
REVIEWED	EJW	JBRAWN + KLS

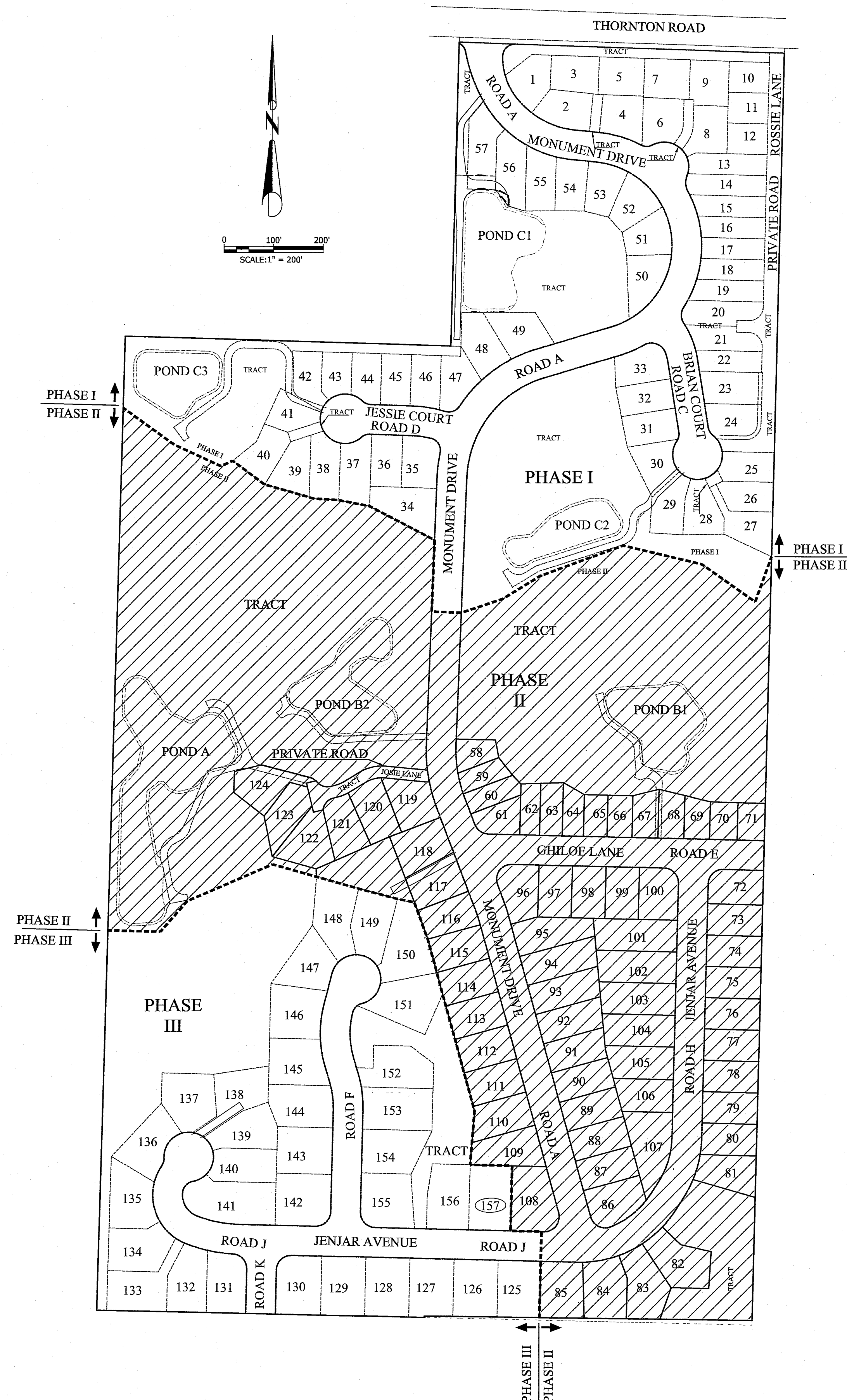
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PROJECT TITLE	THE MEADOWS - PHASE II A PLANNED UNIT DEVELOPMENT THORNTON ROAD FERNDALE, WA
DRAWING TITLE	COVER SHEET

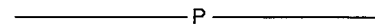
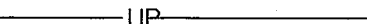
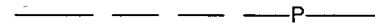
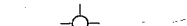
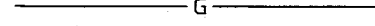
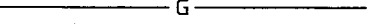
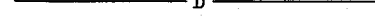
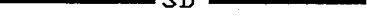
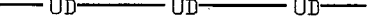
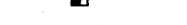
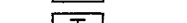
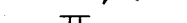
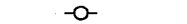
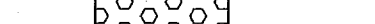
DATE : 01/16/2015
DRAWING No.

1 of 39

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LEGEND

EXISTING		PROPOSED			EXISTING		PROPOSED		
	P		UP	BURIED POWER				CULVERT	
	P		P	OVERHEAD POWER				FIRE HYDRANT	
	CDM		CDM	TELEPHONE				CATCH BASIN	
	G		G	GAS				MANHOLE	
	D		SD	STORM DRAINAGE				VALVE	
			UD	BACK OF WALK DRAIN				CURB STOP	
	S		SS	SEWER				WATER BLOWOFF	
	W		WA	WATER				AIR/VACUUM RELEASE VALVE ASSEMBLY	
			SF	SILT FENCE				POWER VAULT	
				DITCH / BIOSWALE				TELEPHONE VAULT	
				RIGHT-OF-WAY				TELEPHONE RISER	
				UTILITY EASEMENT CONTOUR				SURFACE MONUMENT	
	100		100					TREES	
	X		X	FENCE				SIGN	
				ROAD CENTERLINE				RIP RAP	
				ASPHALT PAVEMENT				UTILITY POLE	
				PORTLAND CEMENT CONCRETE				GUY WIRE	
				GRAVEL ROAD				LIGHT POLE	
								LUMINAIRE & J-BOX	
								REMOVABLE BOLLARDS	

ABBREVIATIONS

ARV	AIR RELEASE VALVE	GV	GATE VALVE	SD	STORM DRAIN
BC	BACK OF CURB	HWE	HIGH WATER ELEVATION	SDCB	STORM CATCH BASIN
BOV	BLOW-OFF VALVE	INV	INVERT	SDMH	STORM MANHOLE
CPCP	CORRUGATED POLYETHYLENE PIPE	MVC	MIDPOINT OF CURVE	SS	SANITARY SEWER
CV	CULVERT	NSM	NORMAL WATER ELEVATION	SSMH	SANITARY MANHOLE
C	CENTERLINE	NWC	NORMAL WATER ELEVATION	STA	STATION
Δ	DELTA	PC	POINT OF CURVE	WA	WATER
EX	EXISTING	PT	POINT OF TANGENCY		
F/G	FINISH GRADE	R	RADIUS		
FH	FIRE HYDRANT	RJ	RESTRAINING JOINT		

I HEREBY CERTIFY THAT THE IMPROVEMENTS IN THE MEADOWS, PHASE II HAVE BEEN INSPECTED BY WEEDEN ENGINEERING, LLC AND TO THE BEST OF OUR KNOWLEDGE, THEY HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE CITY OF FERNDALE DEVELOPMENT STANDARDS, THE CITY OF FERNDALE MUNICIPAL CODE, SUBSEQUENT STANDARDS ADOPTED BY REFERENCE THEREIN, AND STANDARD ENGINEERING PRACTICES



 ERIC WEED

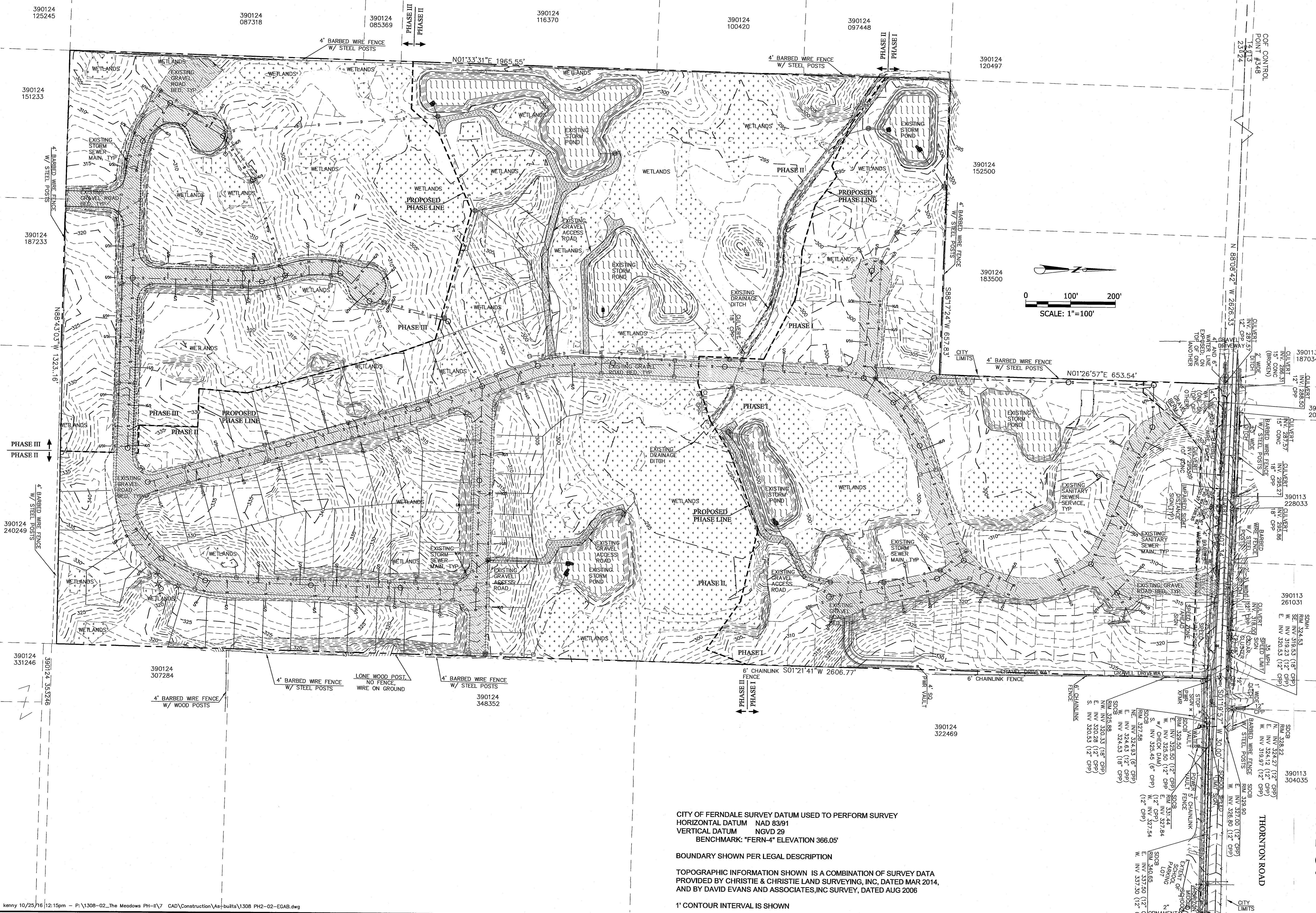
I CERTIFY THAT THE LOCATIONS, ELEVATIONS, DEPTHS, AND AS-BUILT COMMENTS REFLECTION MATERIALS ACTUALLY USED DURING CONSTRUCTION ACCURATELY REFLECT EXISTING FIELD CONDITIONS AS DETERMINED ~~BY ME OR UNDER MY DIRECT SUPERVISION~~ ON THE DATE:

JOSHUA VICTOR DAMN

DESIGN INFORMATION HAS BEEN
REVISED WITH A STRIKEOUT AND
AS-BUILT INFORMATION ADDED

<u>SHEET INDEX</u>	
1	COVER SHEET
2	EXISTING CONDITIONS
3	GENERAL NOTES
4	EROSION CONTROL PLAN
5	SWPPP NOTES
6	GRADING PLAN
7	UTILITY PLAN
8-16	ROAD & STORM PLAN & PROFILE
17-18	STORM REALIGNMENT TO POND A
19	STORMWATER DETENTION POND A
20	STORMWATER DETENTION POND B1
21	STORMWATER DETENTION POND B2
22-30	SANITARY SEWER & WATER PLAN & PROFILE
31	SWPPP DETAILS
32-33	STORM DETAILS
34-35	STREET DETAILS
36-37	SANITARY SEWER DETAILS
38-39	WATER DETAILS

SEC. 24, TWP. 39 N, R. 01 E OF W.M.



AS-BUILTS

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDAL, WA
 DRAWING TITLE
EXISTING CONDITIONS

DATE: 01/16/2015
 DRAWING No.

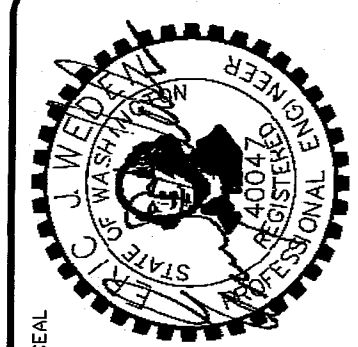
2 of 39

AS-BUILT REVIEWED PER QTY REVIEW 10/13/16

No.	REVISIONS/ SUBMISSIONS	DATE
4	AS-BUILT INFORMATION	11/30/15
3	REVISIONS PER CITY COMMENTS	05/28/15
2	REVISIONS PER CITY COMMENTS	04/14/15
1	REVISED LOT 72-80 & 86-107	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15
1	REVIEWED BY: EOW	
1	DRAWN BY: KLS	
1	PROJECT NO.: 1308-02	

APPROVED
 DEC 12 2016
 CITY OF FERNDAL

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SEC. 24, TWP. 39 N, R. 01 E OF W.M.

GENERAL REQUIREMENTS:

1. ALL WORK AND MATERIALS SHALL CONFORM TO THESE PLANS AND TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE "STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, AND ITS AMENDMENTS"(WSDOT SPECS.) AND STANDARD PLANS, THE CITY OF FERNDALE DEVELOPMENT STANDARDS (COFDS) AND THE 2005 VERSION OF THE DEPARTMENT OF ECOLOGY STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (DOE MANUAL). IN CASE OF A CONFLICT BETWEEN PLANS, REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
2. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER CONSTRUCTION DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES. THROUGHOUT THE PERIOD OF CONSTRUCTION, CONTRACTOR SHALL COMPLY WITH THE TERMS OF ALL PERMITS.
3. THE CONTRACTOR MUST HAVE A FULL SET OF CITY CONTRACT DOCUMENTS ON THE SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. CONSTRUCTION NOISE SHALL BE LIMITED TO BETWEEN 7 a.m. TO 8 p.m., MONDAY THROUGH SATURDAY.
5. THE CONTRACTOR SHALL CONTACT THE UTILITIES UNDERGROUND LOCATION CENTER AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION. PHONE: 1-800-424-5555. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL OF THE VARIOUS UTILITY COMPANIES TO ARRANGE FOR FIELD LOCATIONS OF ALL EXISTING UTILITY FACILITIES. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR COSTS INCURRED BECAUSE OF DAMAGE DONE TO EXISTING FACILITIES BY THE CONTRACTOR'S WORK FORCE, INCLUDING COSTS FOR REPAIRS, WHICH WILL BE CONTRACTOR'S SOLE RESPONSIBILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES AND TO NOTIFY THE PROJECT ENGINEER OF RECORD (ENGINEER) PROMPTLY OF ANY CONFLICT BETWEEN THE APPROVED PLANS AND THE LOCATION OF ANY EXISTING UTILITIES.
6. THE CONTRACTOR SHALL PROTECT ALL PRIVATE AND PUBLIC UTILITIES FROM DAMAGE RESULTING FROM THE WORK. CONTRACTOR SHALL RESTORE ALL PRIVATE AND PUBLIC PROPERTY DISRUPTED BY THE PROJECT IMMEDIATELY AFTER CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING IN CONFORMANCE WITH THE EROSION & SEDIMENTATION CONTROL PLAN AND THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
8. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL ABOVE GROUND AND BURIED DEBRIS AND WASTE THAT MAY BE PRESENT.
9. THE CONTRACTOR SHALL OBTAIN REVOCABLE ENCROACHMENT PERMITS FROM THE CITY OF FERNDALE AND/OR WHATCOM COUNTY PRIOR TO COMMENCING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
10. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH REPRESENTATIVES OF THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT AND THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CITY WILL SCHEDULE THE MEETING.
11. ALL WORK AND MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT. REPRESENTATIVES FROM THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT MUST INSPECT ALL WORK IDENTIFIED ON THE PLANS, BOTH PUBLIC AND PRIVATE. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS AS FOLLOWS:
- A. PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
 - B. CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES.
 - C. PLACEMENT OF WATER MAIN AND BACKFILLING OF WATER MAIN TRENCH WITHIN ROAD RIGHTS OF WAY OR IN WATERLINE EASEMENT TO BE DEDICATED TO THE CITY OF FERNDALE.
 - D. PLACING OR BACKFILLING OF UNDERGROUND UTILITIES, STORM SEWER AND SANITARY SEWER WITHIN ROAD RIGHTS-OF-WAY, IN EASEMENTS TO BE DEDICATED TO THE CITY OF FERNDALE.
 - E. GRADING OF PUBLIC OR PRIVATE ROADWAY AT:
 - 1. COMPLETION OF EXCAVATION TO SUBGRADE.
 - 2. COMPLETION OF BALLAST COURSE PLACEMENT.
 - 3. COMPLETION OF CRUSHED SURFACING COURSE PLACEMENT.
 - F. POURING OF CURB AND GUTTER AND SIDEWALK IN PUBLIC ROADWAY.
 - G. ASPHALT PAVING IN PROGRESS IN PUBLIC ROADWAY.
 - H. OVERALL INSPECTION FOR FINISHED SHOULDERS, DITCHES, PERMANENT SEEDING AND MONUMENT PLACEMENT.
 - I. END OF MAINTENANCE PERIOD.
12. THE 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 THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE AT LEAST ONE FLAGGER FOR EACH LANE OF TRAFFIC AFFECTED. A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO PERFORMING THE WORK. ALL SECTIONS OF THE WSDOT SPECS., 1-07.23- TRAFFIC CONTROL, SHALL APPLY.
13. THE CONTRACTOR SHALL INFORM THE ENGINEER AND OBTAIN APPROVAL FROM THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF ANY PROPOSED DEVIATION FROM THE APPROVED PLANS PRIOR TO CONSTRUCTION OF THE REVISED IMPROVEMENTS. THE CONTRACTOR SHALL KEEP RECORDS OF ALL DEVIATIONS AND SHALL FORWARD THEM TO THE ENGINEER AND TO THE CITY OF FERNDALE PUBLIC WORKS DEPARTMENT.
14. AS-BUILT DATA SHALL BE PROVIDED TO THE CITY OF FERNDALE UPON COMPLETION OF CONSTRUCTION AND PROVIDED IN CITY OF FERNDALE DATUM - VERTICAL (NGVD 29) AND HORIZONTAL (NAD 83/91). CONTACT THE CITY FOR MORE INFORMATION ON SUBMITTAL REQUIREMENTS.

UNDERGROUND UTILITIES CONSTRUCTION

- A. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE ENGINEER TO ASSURE ACCURATE AND TIMELY COLLECTION OF ALL REQUIRED AS-BUILT DATA. THIS DATA MUST ACCURATELY REFLECT THE LOCATIONS OF ALL UNDERGROUND UTILITIES, BOTTOM OF PIPE ELEVATIONS, INVERT ELEVATIONS, MANHOLE LOCATIONS, WATER SERVICE TAPS, BLOW-OFF LOCATIONS AND INVERTS OF SERVICE CONNECTIONS (BOTH AT PIPE AND AT PROPERTY LINE), VERTICAL AND HORIZONTAL BENDS, SERVICE BOXES AND METERS, VALVES AND HYDRANTS. CALL THE ENGINEER AT LEAST 48-HOURS BEFORE BURYING UNDERGROUND PIPE TO ASSURE AND FACILITATE REQUIRED AS-BUILT SURVEY.
- B. THE CONSTRUCTION OF UNDERGROUND UTILITY LINES SHALL BE SUBJECT TO THE FOLLOWING CRITERIA:
- i. NO MORE THAN 500 FEET OF TRENCH SHALL BE OPENED AT ONE TIME.
 - ii. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF DITCHES.
 - iii. TRENCH DEWATERING DEVICES SHALL DISCHARGE INTO SEDIMENT TRAPS OR SEDIMENT PONDS.
 - iv. WHERE PRACTICAL, INSTALL GRAVITY PIPE UTILITIES PRIOR TO INSTALLATION OF OTHER UTILITIES.
- C. UTILITY CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE COFDS.
- D. ALL UTILITY TRENCHES IN THE RIGHT OF WAY SHALL BE BACKFILLED WITH BALLAST PER SECTION 9-03.9(1) WSDOT SPECS.
- E. TESTING OF NEW WATER LINES, STORM SEWER SYSTEMS SHALL NOT BE PERFORMED UNTIL ALL OTHER ADJACENT UTILITIES HAVE BEEN INSTALLED.
- F. ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED TO 95% RELATIVE COMPACTION OR 95% MODIFIED PROCTOR PER TRENCHING DETAIL COFSD SS-15.
- G. OPEN CUTTING OF EXISTING ROADWAYS IS ONLY ALLOWED AS APPROVED AND NOTED ON THESE APPROVED PLANS. ANY OPEN CUT SHALL BE RESTORED IN ACCORDANCE WITH THE CITY OF FERNDALE STANDARD DETAIL (COFSD) R-11 AND SS-15.
- H. NO PART OF THE DRAINAGE SYSTEM MAY BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE CITY INSPECTOR.
- EARTHWORK
- A. THE CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING UN-COMPACTED OR POORLY COMPACTED FILL SOILS WITHIN THE ROAD PRISM AT THE DIRECTION OF THE ENGINEER.
- B. THE CONTRACTOR SHALL EXCAVATE AND GRADE TO THE ALIGNMENT, GRADE AND CROSS-SECTIONS SHOWN IN THE PLANS OR ESTABLISHED BY THE PROJECT ENGINEER OF RECORD.
- C. UNSUITABLE MATERIAL FOUND AND NOT FIT FOR USE AS A SUB-GRADE SHALL BE EXCAVATED TO THE BOUNDARIES SET BY THE ENGINEER AND REPLACED WITH A SUITABLE BACKFILL MATERIAL.
- D. THE ENGINEER IS REQUIRED TO CERTIFY SUBGRADE, IN WRITING, PRIOR TO PAVING.

BASE COURSES & CRUSHED SURFACING

- A. GRAVEL BASES AND BALLAST MATERIAL GRADATION SHALL MEET THE CURRENT EDITION OF WSDOT SPECS.
- B. BALLAST, GRAVEL BASE AND CRUSHED SURFACING SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY.
- C. THE GRADED AND COMPACTED SURFACE OF THE CRUSHED SURFACING TOP COURSE SHALL BE WITHIN 1/2 INCH OF STAKED ELEVATION PROVIDED THE MINIMUM MATERIAL SECTION THICKNESS CONSTRUCTED ARE IN CONFORMANCE WITH CITY OF FERNDALE STANDARD DETAIL R-1 AND R-4 AS SHOWN ON PLAN SHEET 33 OF 39.
- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIAL AND COMPACTION TESTING. PRIOR TO IMPORTING OF MATERIAL FOR BASE AND CRUSHED SURFACING TOP COURSE THE CONTRACTOR SHALL PROVIDE EVIDENCE OF SATISFACTORY PASSING GRADING AND DEGRADATION TEST RESULTS TO THE ENGINEER.

STORM DRAINAGE

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF STORM DRAIN IMPROVEMENTS:
- CATCH BASINS TYPE 1, 1L OR 2 WSDOT STD. DETAILS B-5.20, B-5.40 OR B-10.20
 - "RESIDENTIAL SERVICE LINE" COFSD ST-16
 - INLET & THRU-CURB INLET COFSD ST-7 & COFSD ST-8
- BACK OF WALK DRAINS CONNECT TO THE CURB INLET/NOTED IN ST-16 AND THE REQUIREMENT WHEN TO INSTALL BACK OF WALK DRAINS IS COVERED IN COF DETAILS R-1 AND R-4.
2. STORM SEWER PIPE HAVING DIAMETERS GREATER THAN 8" SHALL BE CORRUGATED POLYETHYLENE PIPE (CPEP) PER SECTION 9-05.20 OF THE WSDOT SPECS. ALL OTHER STORM SEWER PIPE SHALL BE PVC, PER SECTION 9.05.12(1) UNLESS OTHERWISE SPECIFIED ON PLANS.
3. ALL CATCH BASIN GRATES SHALL INCLUDE THE STAMPING "OUTFALL TO STREAM, DUMP NO POLLUTANTS".
4. CONTROL DENSITY FILL SHALL BE USED IN AREAS WHERE LESS THAN 24" OF COVER PER SEC. 1010.F.COFDEVELOPMENT STANDARDS IS MAINTAINED OVER THE PROPOSED STORM PIPES (PIPE IS IN ROAD BASE SECTION), AS SHOWN IN THE PLANS. DUCTILE IRON PIPE OR REINFORCED CONCRETE PIPE MAY BE USED FOR STORM PIPES WITH LESS THAN 18" OF COVER IF APPROVED BY THE CITY.
5. COVER OVER PIPES SHALL BE MAINTAINED DURING CONSTRUCTION. DEPTH OF COVER REQUIRED SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS AND WILL VARY WITH THE VEHICLE LOADS TRAVELING OVER THE PIPE. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR DAMAGE TO PIPE DURING CONSTRUCTION ACTIVITIES.
6. AT THE END OF ALL SITE CONSTRUCTION, THE CONTRACTOR SHALL CLEAN ALL DEBRIS FROM ALL NEW AND AFFECTED CATCH BASINS AND STORMWATER CONVEYANCES. DEBRIS SHALL NOT BE ALLOWED TO ENTER STREAMS OR OFF-SITE STORMWATER SYSTEMS.
7. EACH STORM SEWER STUB SHALL BE CAPPED WITH A WATERTIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2"DIA. WHITE PVC PIPE (MIN. SCHEDULE 40) STENOILED WITH THE WORD "DRAIN" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE.

WATER

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED IN CONSTRUCTING WATER SUPPLY SYSTEM IMPROVEMENTS:
- PIPE BEDDING COFSD W-11
 - TRENCH BACKFILL COFSD W-11
 - FIRE HYDRANT ASSEMBLY COFSD W-1
 - THRUST BLOCKING COFSD W-2, W-3 & W-4
 - WATER SERVICE COFSD W-5
2. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF FERNDALE DEVELOPMENT STANDARDS, SECTIONS 702 AND 705 AND THE MOST RECENT VERSION OF THE WSDOT STANDARD PLANS.
3. ALL WATER MAIN PIPE SHALL BE DUCTILE IRON PER SECTION 9-30.1(1) OF THE WSDOT SPECS., UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.
4. MATERIAL FOR FITTINGS SUCH AS CROSSES, TEES, BENDS, REDUCERS AND SLEEVES SHALL BE DUCTILE IRON. JOINTS SHALL BE M.J., FLANGED OR PUSH-ON JOINTS AND SHALL CONFORM TO SECTION 9-30.2(1) OF THE WSDOT SPECS.
5. CONCRETE BLOCKING SHALL BE AS SPECIFIED IN CITY OF FERNDALE STANDARD DETAILS W-2, W-3 AND W-4, OR AS DIRECTED BY THE PROJECT ENGINEER. BLOCKS SHALL BE INSTALLED AS SPECIFIED IN SECTION 7-09.3(21) OF THE WSDOT SPECS. NO PRE-CAST BLOCKS ARE ALLOWED.
6. CONNECTIONS TO EXISTING WATER MAINS - THE CONTRACTOR MUST NOTIFY THE CITY OF FERNDALE PUBLIC WORKS DIRECTOR OF A PROPOSED CONNECTION AT LEAST FOUR WORKING DAYS IN ADVANCE.
7. ALL HYDROSTATIC TESTING AND DISINFECTION OF WATER MAINS SHALL CONFORM TO SECTION 7-09.3(23) AND SECTION 7-09.3(24) OF THE WSDOT SPECS. HYDROSTATIC TEST PRESSURE FOR WATER MAIN ACCEPTANCE SHALL BE 150 PSI IN EXCESS OF 100 PSI OPERATING PRESSURE FOR THE CITY OF FERNDALE OR 250 PSI. THE HYDROSTATIC TESTING IS TO BE INSPECTED BY THE CITY. THE CONTRACTOR SHALL CALL AT LEAST 24 HOURS IN ADVANCE TO SCHEDULE INSPECTIONS. THE CITY OF FERNDALE LABORATORY SHALL CONDUCT ALL DISINFECTION TESTS AND BACTERIOLOGICAL TESTS. THE PIPE WILL NOT PASS TESTING UNLESS A RESULT OF ZERO BACTERIAL COUNT IS MEASURED 24 HOURS AFTER THE PIPE PASSED HYDROSTATIC TEST AND FLUSHED.
8. BACKFILL SHALL BE BALLAST PER SECTION 9-03.9(1) WSDOT SPECS. IN ALL STREET RIGHTS-OF-WAY, COMPACTED TO MINIMUM 95% RELATIVE COMPACTION. IN UNIMPROVED AREAS, MINIMUM COMPACTION SHALL BE 90% OF RELATIVE COMPACTION.
9. ALL PIPES SHALL HAVE A MINIMUM COVER OF 36".
10. ALL VALVES SHALL BE EITHER GATE OR BUTTERFLY TYPE VALVES AND SHALL BE INSTALLED WITH SLIP TYPE CAST IRON VALVE BOXES. GATE VALVES SHALL BE USED FOR LINES 2 INCHES THROUGH 10 INCHES IN DIAMETER. GATE VALVE MAY BE USED IN LIEU OF BUTTERFLY VALVE FOR 12" LINES IF APPROVED BY THE CITY. SHORT-BODY VALVES SUITABLE FOR A NON-SHOCK SHUT-OFF PRESSURE OF 130 PSI AND SUITABLE FOR DIRECT BURIAL ARE SPECIFIED. GATE VALVES SHALL BE RESILIENT SEATED IRON-BODY, FULL-BRONZE MOUNTED VALVES CONFORMING TO AWWA C509 AND SUITABLE FOR SERVICE WITH THE TYPE AND CLASS OF PIPE USED. ALL VALVES SHALL HAVE NON-RISING STEMS AND SHALL OPEN COUNTERCLOCKWISE AND SHALL BE EQUIPPED WITH 2 INCH SQUARE OPERATING NUT. VALVES WILL BE FLANGE OR M.J. JOINTS. VALVE MARKERS SHALL BE LOCATED OUTSIDE OF PAVEMENT SECTIONS.
11. WATER SERVICE TAP INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE COFSD W-5.
12. FIRE HYDRANTS AND FIRE MAINS MUST CONFORM TO COFDS (COFSD W-1, WSDOT B-19) AND THE FOLLOWING STANDARDS:
- A. FIRE HYDRANTS SHALL HAVE TWO INDIVIDUALLY VALVED 2-1/2" PORTS AND ONE 5-1/4" MAIN VALVE OPENING. A 4-1/2" NST PUMPER NOZZLE AND A 5" STOKZ PORT WITH CAP AND AIRCRAFT CABLE SHALL BE SUPPLIED. HYDRANTS SHALL BE M.H. 929T HYDRANTS.
 - B. FIRE HYDRANTS SHALL HAVE THE STOKZ PORT FACING THE REQUIRED ACCESS AND THE BASE FLANGE OF THE HYDRANT MUST NOT VARY MORE THAN 1 FOOT IN ELEVATION FROM THE GRADE LEVEL OF THE REQUIRED ACCESS. THE LOWEST STEM SHALL BE A MINIMUM OF 14" ABOVE THE GROUND.
 - C. IF THE PUBLIC WORKS DIRECTOR DETERMINES THAT FIRE HYDRANTS ARE VULNERABLE TO VEHICULAR DAMAGE, APPROPRIATE HYDRANT GUARD POSTS SHALL BE PROVIDED. NO OBSTRUCTIONS SHALL EXIST WITHIN A 3-FOOT WORKING AREA OF EACH REQUIRED ACCESS. CRASH POSTS SHALL BE 4" CEMENT-FILLED PIPE A MIN. OF 3' IN HEIGHT WITH A MIN. OF 2' OF PIPE BELOW GRADE. HYDRANT SHUTOFF VALVES SHALL BE LOCATED BETWEEN 5' AND 20' FROM THE HYDRANT.
 - D. UNDERGROUND SUPPLIES TO FIRE HYDRANTS MUST BE INSPECTED. SUCH INSPECTION SHALL INCLUDE VISUAL INSPECTION OF PIPING AND HYDROSTATIC PRESSURE TESTING TO A MIN. OF 250 PSI. A FLOW TEST WILL BE REQUIRED WHEN INSTALLATION IS COMPLETE.
 - E. FIRE HYDRANTS MUST BE MAINTAINED IN AN OPERABLE CONDITION AT ALL TIMES AND MUST BE REPAIRED OR REPLACED WHEN DEFECTIVE. HYDRANTS SHALL BE FULLY OPERABLE BEFORE CONSTRUCTION COMMENCES ABOVE GRADE LEVEL.

ROAD

1. THE FOLLOWING STANDARD DETAILS SHALL BE USED FOR CONSTRUCTION OF THE STANDARD STREET SECTION:
- TYPICAL STREET SECTION (PER PROJECT)
- PCC CURB AND GUTTER COFSD R-9
 - PCC SIDEWALKS COFSD R-12 (SEE CONSTRUCTION DOCUMENTS TYPICAL SECTION)
 - PCC SIDEWALK RAMPS WSDOT STD. DETAIL F-40 ANF F-42
 - PCC CEMENT CONCRETE DRIVEWAY ENTRANCE WSDOT STD. DETAIL F-80
2. ROADWAY EXCAVATION WITHIN THE ROADWAY PRISM SHALL BE CUT TO A UNIFORM GRADE. BEFORE PLACING ROADWAY BALLAST SECTION PER COF DETAIL R-4, THE COMPLETE COMPACTED SUBGRADE SHALL ACHIEVE 95 PERCENT OF THE MAXIMUM DENSITY AND SHALL NOT VARY MORE THAN 0.10-FOOT FROM THE LOWER EDGE OF A 15-FOOT STRAIGHTEDGE PLACED ON THE SUBGRADE PARALLEL TO THE CENTERLINE UNLESS APPROVED BY THE CITY.
3. THE OWNER SHALL PROVIDE TO THE ENGINEER A REPORT FROM A QUALIFIED GEOTECHNICAL FIRM CERTIFYING THE COMPACTION OF THE GRAVEL BASE/BALLAST UNDER ALL PAVING AREAS. THE MATERIAL TESTING LAB SHALL SUBMIT TEST REPORTS TO THE ENGINEER OF RECORD, CONTRACTOR, AND THE CITY OF FERNDALE TO ENSURE AS-BUILT PROJECT CERTIFICATION BY THE ENGINEER OF RECORD.
4. HOT MIX ASPHALT WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 5-04 OF THE WDOT SPECS., EXCEPT AS MODIFIED HEREIN. CONNECTION TO EXISTING PAVEMENT SHALL BE TO A STRAIGHT NEATLY-TRIMMED LINE.
5. CRUSHED ROCK SURFACING FOR PAVEMENT SHALL BE IN ACCORDANCE WITH WSDOT SPECS., SECTION 9-03.9(3); BALLAST PER SECTION 9-03.9(1).
6. CEMENT CONCRETE SHALL BE CLASS 3000 (WITH AIR ENTRAINMENT) IN ACCORDANCE WITH WSDOT SPECS., SECTION 6-02.3(2)B. CONCRETE SIDEWALKS SHALL BE CLASS 3000 AND CEMENT CONCRETE DRIVEWAY ENTRANCE SHALL BE CLASS 4000 PER WSDOT STANDARD SPECIFICATIONS.
7. CEMENT CONCRETE SIDEWALK SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH COFSD R-12.
8. CEMENT CONCRETE DRIVEWAYS SHALL BE 6 INCHES THICK AND CONSTRUCTED WHERE SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER IN ACCORDANCE WITH THE COFSD R-15. A 2- INCH LAYER OF 3/4 INCH DRAIN ROCK SHALL BE USED FOR DRIVEWAY BEDDING.
9. CEMENT CONCRETE CURB AND GUTTER SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS OR AS DESIGNED BY THE ENGINEER, IN ACCORDANCE WITH WSDOT SPECS., SECTION 8-04 AND COFSD R-8 AND R-9. HANDICAP RAMPS SHALL BE CONSTRUCTED PER WSDOT STANDARD DETAIL F-40. WHERE NEW CEMENT CONCRETE CURB AND GUTTER IS TO CONNECT TO EXISTING CURB AND GUTTER, ASSURE THAT NO ABRUPT OFFSETS IN LINE OR GRADE SHALL BE CONSTRUCTED WHICH WILL BE UNSIGHTLY OR IMPEDE FLOW IN THE GUTTER LINE.
10. PAVEMENT:
- A. SOIL RESIDUAL HERBICIDE SHALL BE PLACED WITHIN 24 HOURS OF PAVING.
 - B. A TACK COAT OF ASPHALT SHALL BE APPLIED BETWEEN ALL COURSES OF ASPHALT.
 - C. ALL PAVEMENT REPAIR SHALL BE SAW-CUT BEFORE REMOVAL. AR-4000W SHALL BE APPLIED TO ALL EDGES OF EXISTING PAVEMENT. WHERE NEWLY CONSTRUCTED PAVING MEETS EXISTING PAVING, THE APPLICANT SHALL PROVIDE A SMOOTH TRANSITION FROM EXISTING TO PROPOSED PAVING. CONTRACTOR SHALL COLD PLANE PER DIMENSIONS SPECIFIED ON THE PLANS, AND INSTALL A MINIMUM 2-FOOT WIDE PETROTAC PAVING FABRIC, OR EQUIVALENT, OVER JOINT BETWEEN PAVING LIFTS.
11. THRU-CURB BASINS AND THRU-CURB INLETS CONFORMING TO THE WSDOT SPECS, SECTION 7-05 SHALL BE CONSTRUCTED AT THE LOW POINT OF THE CURB FLOW LINES AND TO THE LOCATIONS, DIMENSIONS, AND DETAILS AS SHOWN ON THE PLANS OR DESIGNATED BY THE ENGINEER AND COFSD-R-8.
12. TRENCH EXCAVATIONS, BEDDING AND PIPE FOR STORMWATER PIPE LAYING SHALL BE IN ACCORDANCE WITH THE WSDOT SPECS., SECTION 7-08.
13. STORM SEWER PIPE CONSTRUCTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH WSDOT SPECS., SECTION 7-04. LOTS' STORM DRAIN SERVICE LINE SHALL BE 6" PVC PER WSDOT SPECS., SECTION 9-05.12(1)
14. PERFORATED UNDERDRAIN PIPE SHALL MEET THE WSDOT SPECS., 9-05.12(1).

SANITARY SEWER SYSTEMS

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH COFDS, COFSD, A.P.W.A. STANDARD SPECIFICATIONS, AND WSDOT SPECS. SANITARY SEWER SYSTEM INSTALLATION, BOTH PUBLIC AND PRIVATE, IS SUBJECT TO CITY REVIEW AND APPROVAL.
2. ALL WORK MUST BE INSPECTED TO THE SATISFACTION OF THE CITY OF FERNDALE. 24 HOUR NOTICE MUST BE GIVEN PRIOR TO STARTING WORK. TESTING OF THE SEWER SYSTEM AND ALL CONNECTIONS TO EXISTING MAINS SHALL BE PERFORMED IN THE PRESENCE AND UNDER THE SUPERVISION OF A CITY OF FERNDALE REPRESENTATIVE.
3. SANITARY SEWER MAINS SHALL BE A MINIMUM 8 INCH DIAMETER PVC PIPE CONFORMING TO WSDOT SPECS. 9-05.12(1) AND INSTALLED PER COFDS.
4. SANITARY SEWER PIPE BEDDING SHALL BE PEA GRAVEL PER COFSD SS-1. ALL TRENCHES SHALL BE BACKFILLED WITH BALLAST WITHIN CITY RIGHT OF WAY AND TRAVELED WAYS OUTSIDE OF RIGHT OF WAY (ACCESS EASEMENTS) AND SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% MODIFIED PROCTOR. USE OF SUITABLE NATIVE BACKFILL OUTSIDE OF TRAVELED WAY SHALL BE SUBJECT TO APPROVAL BY THE CITY.
5. ALL MANHOLES SHALL BE INSTALLED PER WSDOT STANDARD PLAN B-15.20-01 AND SHALL BE PRE-CHANNELED. MANHOLE CONES ARE TO BE OFFSET SUCH THAT LADDER RINGS ARE PARALLEL TO THE FLOW.
6. ALL SIDE SEWERS SHALL BE INSTALLED PER COFSD SS-6, SS-8 OR SS-13, EXCEPT THAT SINGLE SIDE SEWERS SHALL HAVE A MINIMUM DIAMETER OF 4".
7. CONTRACTOR SHALL EXTEND SEWER STUBS 5 FT BEYOND UTILITY CORRIDOR OR 15 FEET BEYOND RIGHT-OF-WAY LINE.
8. EACH SIDE SEWER STUB SHALL BE CAPPED WITH A WATERTIGHT PLUG. EACH STUB SHALL BE MARKED FOR LOCATION WITH A 2"DIA. WHITE PVC PIPE (MIN. SCHEDULE 40) WITH THE TOP 18" PAINTED GREEN AND STENOILED WITH THE WORD "SEWER" AND THE PIPE INVERT INDICATED. THE LOCATION MARKER SHALL BE CONNECTED TO THE SERVICE STUB BY A #12 COPPER WIRE. THE DEPTH OF EACH SEWER STUB FROM FINISHED GRADE SHALL BE CLEARLY NOTED UNDER THE WORD SEWER ON EACH STUB MARKER IN PERMANENT PAINT.

AS-BUILTS

AS-BUILT REVISED PER CITY REVIEW 10/13/16

No.	REVISIONS/ SUBMISSIONS	DATE
	AS-BUILT INFORMATION	03/21/16
4	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
2	REVISED LOT 72-80 & 86-107	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15
REVIEWED BY	EW	BRAWN I. KLS
CAD FILE		PROJECT NO. 1308-02

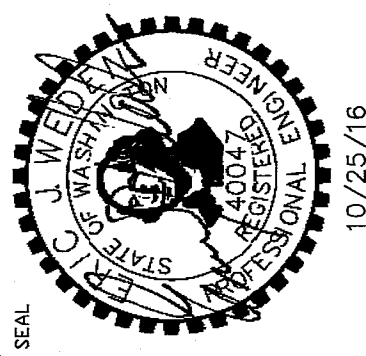
PROJECT TITLE
**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA**

DRAWING TITLE
GENERAL NOTES

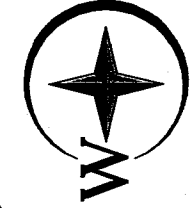
DATE: 01/16/2015

DRAWING No.

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APPROVED
DEC 12 2016
CITY OF FERNDALE

BY

SEC. 24, TWP. 39 N, R. 01 E OF W.M.

FOR EROSION CONTROL DETAILS,
SEE SHEET 31

ORANGE CONSTRUCTION FENCING
WILL BE ERECTED ALONG THE
EDGE OF ALL WETLANDS.

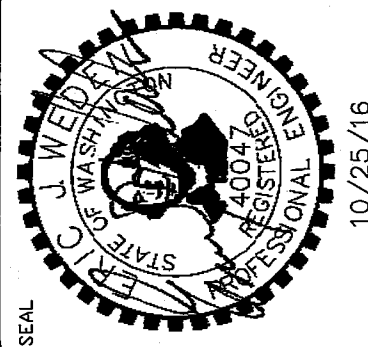
SILT FENCE WILL BE PLACED
ALONG THE TOE OF ANY
STOCKPILE AREAS.
STOCKPILE AREAS WILL BE
COVERED.

0 80' 160'
SCALE: 1"=80'

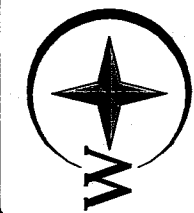


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CITY OF FERDALE

BY

AS-BUILT REVISED PER CITY REVIEW 10/13/16

REVISIONS / SUBMISSIONS	DATE
AS-BUILT INFORMATION	03/21/16
REVISIONS PER CITY COMMENTS	05/28/15
REVISIONS PER CITY COMMENTS	04/14/15
REVISIONS PER CITY COMMENTS	03/07/15
REVISIONS PER CITY COMMENTS	03/02/15
REVIEWED BY: EJM	DRAWN BY: KLS
CAD FILE	PROJECT NO.: 1308-02

AS-BUILTS

THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERDALE, WA

SWPPP- EROSION CONTROL PLAN

DATE: 01/16/2015
DRAWING NO.

4 of 39

kenny 10/25/16 12:24pm - P:\3308-02-The Meadows PH-II-V CAD\Construction\As-Built\3308 PH-II-04-EC04.dwg

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

THIS STORMWATER POLLUTION PREVENTION PLAN IS PROVIDED IN ACCORDANCE WITH THE TERMS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR CONSTRUCTION ACTIVITIES FOR THIS PROJECT. THE CONTRACTOR IS ADVISED THAT THE PROJECT AREA DRAINS TO WETLANDS AND/OR STATE WATERS AND THAT THE CONTRACTOR IS RESPONSIBLE TO PROTECT THE RECEIVING WATERS FROM DELETERIOUS EFFECTS OF CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO HAVE A COPY OF THE NPDES PERMIT AS WELL AS THE SWPPP ON SITE AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING EROSION CONTROL MEASURES SHOWN OR DESCRIBED IN THE CONTRACT DOCUMENTS AND ANY ADDITIONAL MEASURES THAT MAY BE REQUIRED TO CONTROL EROSION AND SEDIMENT AT THE CONSTRUCTION SITE AND TO PREVENT VIOLATION OF SURFACE WATER QUALITY, GROUND WATER QUALITY, OR SEDIMENT MANAGEMENT STANDARDS. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION AND UNTIL ALL DISTURBED EARTH IS STABILIZED IN FINISH GRADES. THE FOLLOWING DESCRIBES HOW THE CONSTRUCTION SWPPP ADDRESSES EACH OF THE 12 REQUIRED ELEMENTS. REFER TO THESE PLANS FOR DRAWINGS OF THE PROJECT, VICINITY MAP, SITE MAP, CONVEYANCE SYSTEMS, EROSION AND SEDIMENT CONTROL MEASURES, AND EROSION AND SETTLEMENT CONTROL DETAILS.

ELEMENT #1: PRESERVE VEGETATION/MARK CLEARING LIMITS

1. PRIOR TO BEGINNING LAND DISTURBING ACTIVITIES (INCLUDING CLEARING AND GRADING) CLEARLY MARK ALL CLEARING LIMITS AND TREES THAT ARE TO BE PRESERVED WITHIN THE CONSTRUCTION AREA AS SHOWN IN THE DRAWINGS.
 2. SILT FENCE, GEOTEXTILE ENCASED BARRIERS, CONSTRUCTION FENCE, ORANGE PLASTIC FENCE, OR OTHER APPROVED MEASURES MAY BE USED TO MARK THE CLEARING LIMITS AT THE CONTRACTOR'S OPTION.
 3. THE DUFF LAYER, NATIVE TOPSOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM DEGREE PRACTICABLE.
- SUGGESTED BMPs/BMPs TO BE USED:
- BMP C101: PRESERVING NATIVE VEGETATION
BMP C103: HIGH VISIBILITY PLASTIC OR METAL FENCE
BMP C104: STAKE AND WIRE FENCE
BMP C233: SILT FENCE

ELEMENT #2: ESTABLISH CONSTRUCTION ACCESS

1. INSTALL CONSTRUCTION VEHICLE ACCESS PER DOE MANUAL BMP C105. ALL ACCESS/EXIT POINTS SHALL BE STABILIZED WITH QUARRY SPALLS, CRUSHED ROCK OR OTHER EQUIVALENT BMP, TO MINIMIZE THE TRACKING OF SEDIMENT ONTO PUBLIC ROADS.
 2. IF THE STABILIZED CONSTRUCTION ENTRANCE IS NOT EFFECTIVE IN PREVENTING SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADS, WHEEL WASH OR TIRE BATHS SHALL BE LOCATED ON SITE.
 3. IF SEDIMENT IS TRACKED OFF SITE, PUBLIC ROADS SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY, OR MORE FREQUENTLY DURING WET WEATHER. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR PICKUP SWEEPING AND SHALL BE TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
 4. STREET WASHING IS ALLOWED ONLY AFTER SEDIMENT IS REMOVED AS DESCRIBED ABOVE. STREET WASH WASTEWATER SHALL BE CONTROLLED BY PUMPING BACK ON SITE OR OTHERWISE BE PREVENTED FROM DISCHARGING INTO SYSTEMS TRIBUTARY TO WATERS OF THE STATE.
- SUGGESTED BMPs/BMPs TO BE USED:
- BMP C105: STABILIZED CONSTRUCTION ENTRANCE
BMP C106: WHEEL WASH

ELEMENT #3: CONTROL FLOW RATES

1. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN VELOCITY AND PEAK VOLUMETRIC FLOW RATE OF STORMWATER RUNOFF FROM THE PROJECT SITE.
- SUGGESTED BMPs/BMPs TO BE USED:
- BMP C208: TRIANGULAR SILT DIKE
BMP C235: STRAW WATTLES
BMP C240: SEDIMENT TRAP

ELEMENT #4: INSTALL SEDIMENT CONTROLS

1. THE DUFF LAYER, NATIVE SOIL, AND NATURAL VEGETATION SHALL BE RETAINED IN AN UNDISTURBED STATE TO THE MAXIMUM EXTENT PRACTICABLE.
 2. SEDIMENT CONTROL BMPs SHALL BE CONSTRUCTED AS ONE OF THE FIRST STEPS IN GRADING. THESE BMPs SHALL BE FUNCTIONAL BEFORE OTHER LAND DISTURBING ACTIVITIES TAKE PLACE.
 3. PRIOR TO LEAVING THE CONSTRUCTION SITE, STORMWATER RUNOFF FROM DISTURBED AREAS SHALL PASS THROUGH AN APPROPRIATE SEDIMENT REMOVAL BMP, BUT MUST MEET THE FLOW CONTROL PERFORMANCE STANDARD ELEMENT #3.
- SUGGESTED BMPs/BMPs TO BE USED:
- BMP C220: STORM DRAIN INLET PROTECTION
BMP C233: SILT FENCE
BMP C234: VEGETATED STRIP
BMP C235: STRAW WATTLES
BMP C240: SEDIMENT TRAP

ELEMENT #5: STABILIZE SOILS

1. EXPOSED AND UNWORKED SOILS SHALL BE STABILIZED BY APPLICATION OF EFFECTIVE BMPs THAT PROTECT THE SOIL FROM EROSIIVE FORCES OF RAINDROPS, WATER, AND WIND.
 2. TO PREVENT EROSION, NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN THE TIME PERIODS SET FORTH BELOW:
DURING THE WET SEASON (OCTOBER 1-APRIL 30): 2 DAYS
DURING THE DRY SEASON (MAY 1-SEPT. 30): 7 DAYS
THIS STABILIZATION REQUIREMENT APPLIES TO ALL SOILS ON SITE, WHETHER AT FINAL GRADE OF NOT. THESE TIMES MAY BE ADJUSTED BY THE LOCAL PERMITTING AUTHORITY IF IT CAN BE SHOWN THAT SITE CONDITIONS OR THE AVERAGE TIME BETWEEN STORM EVENTS JUSTIFIES A DIFFERENT STANDARD.
 3. SOILS SHALL BE STABILIZED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST.
 4. SOIL STOCKPILES SHALL BE STABILIZED FROM EROSION, PROTECTED WITH SEDIMENT TRAPPING MEASURES, AND WHERE POSSIBLE, BE LOCATED AWAY FROM STORM DRAIN INLETS, WATERWAYS, AND DRAINAGE CHANNELS.
 5. APPLICABLE BMPs INCLUDE, BUT ARE NOT LIMITED TO: TEMPORARY AND PERMANENT SEEDING, SODDING, MULCHING, PLASTIC COVERING, EROSION CONTROL FABRICS AND MATTING, SOIL APPLICATION OF POLYACARLAMYIDE (PAM), EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED AND DUST CONTROL. SELECT SOIL STABILIZATION MEASURES SHALL BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, ESTIMATED DURATION OF USE, AND THE POTENTIAL WATER QUALITY IMPACTS.
 6. REMOVE ALL TESC MEASURES AS SOON AS PRACTICAL AFTER ESTABLISHMENT OF UNIFORM GRASS GROWTH OR INSTALLATION OF OTHER PERMANENT STABILIZATION MEASURES. REPAIR ANY DAMAGE TO STABILIZED SURFACES AFTER REMOVAL OF TESC MEASURES.
- SUGGESTED BMPs/BMPs TO BE USED:
- BMP C120: TEMPORARY AND PERMANENT SEEDING
BMP C121: MULCHING
BMP C122: NETS AND BLANKETS
BMP C123: PLASTIC AND COVERING
BMP C140: DUST CONTROL

ELEMENT #6: PROTECT SLOPES

1. DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. APPLICABLE PRACTICES INCLUDE, BUT ARE NOT LIMITED TO, REDUCING CONTINUOUS LENGTH OF SLOPE WITH TERRACING AND DIVERSIONS, REDUCING SLOPE STEEPNESS, AND ROUGHENING SLOPE SURFACES (E.G. TRACK WALKING).
 2. STORMWATER OR GROUNDWATER FROM OFF SITE SHALL BE DIVERTED AWAY FROM SLOPES AND DISTURBED AREAS WITH INTERCEPTOR DIKES, PIPES, AND/OR SWALES. OFF-SITE STORMWATER SHOULD BE MANAGED SEPARATELY FROM STORMWATER GENERATED ON THE SITE.
 3. DO NOT CLEAR AND GRUB SLOPES GREATER THAN 4 (HORIZONTAL):1 (VERTICAL) UNLESS FURTHER WORK RESULTING IN STABILIZATION OF THE SLOPES TO BE CLEARED AND GRUBBED IS SCHEDULED.
 4. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES, CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS.
 5. CHECK DAMS SHALL BE PLACED AT REGULAR INTERVALS WITHIN CONSTRUCTED CHANNELS THAT ARE CUT DOWN A SLOPE.
- SUGGESTED BMPs TO BE USED:
- BMP C120: TEMPORARY AND PERMANENT SEEDING
BMP C200: INTERCEPTOR DIKE AND SWALE
BMP C201: GRASS-LINED CHANNELS
BMP C202: CHANNEL LINING
BMP C206: LEVEL SPREADER
BMP C207: CHECK DAMS
BMP C208: TRIANGULAR SILT DIKE

ELEMENT #7: PROTECT DRAIN INLETS

1. ALL STORM DRAIN INLETS OPERABLE DURING CONSTRUCTION AND ALL INLETS WITHIN 200 FEET DOWNSTREAM OF THE PROJECT SITE SHALL BE PROTECTED WITH CATCH BASIN FILTERS SO THAT STORMWATER RUNOFF DOES NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR TREATED TO REMOVE SEDIMENT. CATCH BASIN FILTERS IN THE ROADWAY WILL BE OIL/SEDIMENT FILTERS AND CATCH BASIN FILTERS OUTSIDE OF THE ROADWAY WILL BE SEDIMENT FILTERS.
 2. APPROACH ROADS SHALL BE KEPT CLEAN. SEDIMENT AND STREET WASH WATER SHALL NOT BE ALLOWED TO ENTER STORM DRAINS WITHOUT PRIOR AND ADEQUATE TREATMENT.
 3. INLET PROTECTION DEVICES SHOULD BE CLEANED OR REMOVED AND REPLACED WHEN SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE (OR WHEN FILLED WITH SIX-INCHES OF SEDIMENT).
- SUGGESTED BMPs TO BE USED:
- BMP C220: STORM DRAIN INLET PROTECTION

ELEMENT #8: STABILIZE CHANNELS AND OUTLETS

1. ALL TEMPORARY ON-SITE CONVEYANCE CHANNELS SHALL BE DESIGNED, CONSTRUCTED AND STABILIZED TO PREVENT EROSION FROM THE EXPECTED PEAK 10-MINUTE VELOCITY OF FLOW FROM A TYPE 1A, 10-YEAR, 24-HOUR FREQUENCY STORM FOR THE DEVELOPED CONDITION. ALTERNATIVELY, THE 10-YEAR FLOW RATE INDICATED BY AN APPROVED CONTINUOUS RUNOFF MODEL, INCREASED BY A FACTOR OF 1.6, MAY BE USED.
 2. STABILIZATION, INCLUDING ARMORING MATERIAL, ADEQUATE TO PREVENT EROSION OF OUTLETS, ADJACENT STREAM BANKS, SLOPES, AND DOWNSTREAM REACHES SHALL BE PROVIDED AT THE OUTLETS ALL CONVEYANCE SYSTEMS.
- SUGGESTED BMPs/BMPs TO BE USED:
- BMP C201: GRASS-LINED CHANNELS
BMP C202: CHANNEL LINING
BMP C206: LEVEL SPREADER
BMP C207: CHECK DAMS
BMP C208: TRIANGULAR SILT DIKE
BMP C209: OUTLET PROTECTION

ELEMENT #9: CONTROL POLLUTANTS

1. ALL POLLUTANTS, INCLUDING WASTE MATERIALS AND DEMOLITION DEBRIS, THAT OCCUR ON SITE, SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER.
2. COVER, CONTAINMENT, AND PROTECTION FROM VANDALISM SHALL BE PROVIDED FOR ALL CHEMICALS, LIQUID PRODUCTS, PETROLEUM PRODUCTS, AND OTHER MATERIALS THAT HAVE THE POTENTIAL TO POSE A THREAT TO HUMAN HEALTH AND OR THE ENVIRONMENT. ON-SITE FUELING TANKS SHALL INCLUDE SECONDARY CONTAINMENT.
3. MAINTENANCE, FUELING, AND REPAIR OF HEAVY EQUIPMENT VEHICLES SHALL BE CONDUCTED USING SPILL PREVENTION AND CONTROL MEASURES. CONTAMINATED SURFACES SHALL BE CLEANED IMMEDIATELY FOLLOWING ANY SPILL INCIDENT.
4. WHEEL WASH OR TIRE BATH WASTEWATER SHALL BE DISCHARGED TO A SEPARATE ON-SITE TREATMENT SYSTEM OR TO THE SANITARY SEWER WITH LOCAL SEWER DISTRICT APPROVAL.
5. APPLICATION OF FERTILIZERS AND PESTICIDES SHALL BE CONDUCTED IN A MANNER AND AT APPLICATION RATES THAT WILL NOT RESULT IN LOSS OF CHEMICALS TO STORMWATER RUNOFF. MANUFACTURERS' LABEL REQUIREMENTS FOR APPLICATION RATES AND PROCEDURES SHOULD BE FOLLOWED.
6. BMPs SHALL BE USED TO PREVENT OR TREAT CONTAMINATION OF STORMWATER RUNOFF BY PH MODIFYING SOURCES. THESE SOURCES INCLUDE, BUT ARE NOT LIMITED TO: BULK CEMENT, CEMENT KILN DUST, FLY, ASH, NEW CONCRETE WASHING AND CURING WATERS, WASTE STREAMS GENERATED FROM CONCRETE GRINDING AND SAWING, EXPOSED AGGREGATE PROCESSES, AND CONCRETE PUMPING AND MIXER WASHOUT WATERS. PERMITTEES SHALL ADJUST THE PH OF STORMWATER IF NECESSARY TO PREVENT VIOLATIONS OF WATER QUALITY STANDARDS.
7. PERMITTEES SHALL OBTAIN WRITTEN APPROVAL FROM ECOLOGY PRIOR TO USING CHEMICAL TREATMENT, OTHER THAN CARBON DIOXIDE OR DRY ICE, TO ADJUST PH.
8. PROCESS WATER AND SLURRY RESULTING FROM CONCRETE WORK WILL BE PREVENTED FROM ENTERING THE WATERS OF THE STATE BY IMPLEMENTING CONCRETE HANDLING MEASURES. (BMP C151).

ELEMENT #10: CONTROL DE-WATERING

1. FOUNDATION, VAULT, AND TRENCH DE-WATERING, WATER WHICH HAVE SIMILAR CHARACTERISTICS TO STORMWATER, SHALL BE DISCHARGED INTO A CONTROLLED CONVEYANCE SYSTEM PRIOR TO DISCHARGE TO A SEDIMENT TRAP OR SEDIMENT POND. STABILIZE CHANNELS PER ELEMENT #8.
2. CLEAN, NON TURBID DE-WATERING WATER, SUCH AS WELL-POINT GROUND WATER, CAN BE DISCHARGED TO SYSTEMS TRIBUTARY TO, OR DIRECTLY INTO, SURFACE WATERS OF THE STATE, PROVIDED THE DE-WATERING FLOW DOES NOT CAUSE EROSION OR FLOODING OR A VIOLATION OF STATE WATER QUALITY STANDARDS IN THE RECEIVING WATERS. CLEAN DE-WATERING WATER SHOULD NOT BE ROUTED THROUGH STORMWATER SEDIMENTS PONDS.
3. OTHER DE-WATERING DISPOSAL OPTIONS MAY INCLUDE:
 - a) INFILTRATION
 - b) TRANSPORT OFF SITE IN A VEHICLE, SUCH AS A VACUUM FLUSH TRUCK, FOR LEGAL DISPOSAL IN A MANNER THAT DOES NOT POLLUTE STATE WATERS.
 - c) ECOLOGY APPROVED ON-SITE CHEMICAL TREATMENT OF OTHER SUITABLE TREATMENT TECHNOLOGIES.
 - d) SANITARY SEWER DISCHARGE WITH LOCAL SEWER DISTRICT APPROVAL, IF THERE IS NO OTHER OPTION.
 - e) USE OF A SEDIMENTATION BAG (DIRTBAG OR APPROVED EQUAL) WITH OUTFALL TO A DITCH OR SWALE FOR SMALL VOLUMES OF LOCALIZED DE-WATERING.
4. HIGHLY TURBID, CONTAMINATED DEWATERING WATER SUCH AS FROM CONSTRUCTION EQUIPMENT OPERATION, CLAMSHELL DIGGING, CONCRETE TREMIE POUR, OR WORK INSIDE A COFFERDAM, SHALL BE HANDLED SEPARATELY FROM STORMWATER. SUCH CONTAMINATED WATER WILL REQUIRE ADDITIONAL MONITORING AND TREATMENT AS REQUIRED FOR THE SPECIFIC POLLUTANTS BASED ON THE RECEIVING WATERS INTO WHICH THE DISCHARGE IS OCCURRING. SUCH MONITORING IS THE RESPONSIBILITY OF THE CONTRACTOR.

ELEMENT #11: MAINTAIN BMPs

1. VISUALLY INSPECT EROSION CONTROL DEVICES ON A WEEKLY BASIS AND WITHIN 24 HOURS OF ANY STORMWATER EVENT. MAKE NECESSARY REPAIRS AND MAINTENANCE TO ENSURE CONTINUED PERFORMANCE OF EROSION AND SEDIMENT CONTROLS. IF THE SITE BECOMES INACTIVE AND IS TEMPORARILY STABILIZED, THE INSPECTION FREQUENCY WILL BE REDUCED TO ONCE EVERY MONTH.
2. WHEN SEDIMENT ACCUMULATION IN SEDIMENTATION STRUCTURES, OTHER THAN INLET PROTECTION DEVICES, HAS REACHED A POINT OF ONE-THIRD OF THE DEPTH OF THE SEDIMENT STRUCTURE OR DEVICE, OR IF FLOW THROUGH THE DEVICE IS REDUCED BY MORE THAN ONE-THIRD OF THE CAPACITY, THE CONTRACTOR SHALL REMOVE AND REPLACE DISPOSABLE DEVICES OR CLEAN AND DISPOSE OF SEDIMENT.
3. TEMPORARY EROSION AND SEDIMENT CONTROL BMPs SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOILS SHALL BE PERMANENTLY STABILIZED.

ELEMENT #12: MANAGE THE PROJECT

1. PHASING OF CONSTRUCTION:
 - a) PROJECTS SHALL BE PHASED WHERE FEASIBLE IN ORDER TO PREVENT, TO THE MAXIMUM EXTENT PRACTICABLE, THE TRANSPORT OF SEDIMENT FROM THE DEVELOPMENT SITE DURING CONSTRUCTION. REVEGETATION OF EXPOSED AREAS AND MAINTENANCE OF THAT VEGETATION SHALL BE AN INTEGRAL PART OF THE CLEARING ACTIVITIES FOR ANY PHASE, PER THE SCHEDULING BMP (C162).
 - b) CLEARING AND GRADING ACTIVITIES FOR DEVELOPMENT SHALL BE PERMITTED ONLY IF CONDUCTED PURSUANT TO AN APPROVED SITE DEVELOPMENT PLAN (E.G. SUB DIVISION APPROVAL) THAT ESTABLISHES APPROVED AREAS OF CLEARING, GRADING CUTTING AND FILLING, WHEN ESTABLISHING THESE AREAS, MINIMIZE REMOVAL OF EXISTING TREES AND MINIMIZE DISTURBANCE AND COMPACTION OF NATIVE SOILS EXCEPT AS NEEDED FOR BUILDING PURPOSES. THESE PERMITTED CLEARING AND GRADING AREAS, GROWTH PROTECTION EASEMENTS, OR TREE RETENTION AREAS, AS MAY BE REQUIRED BY LOCAL JURISDICTIONS, SHALL BE DELINEATED ON THE SITE PLANS AND THE DEVELOPMENT SITE.

2. SEASONAL WORK LIMITATIONS:

- FROM OCTOBER 1 THROUGH APRIL 30, CLEARING, GRADING, AND OTHER SOIL DISTURBING ACTIVITIES SHALL ONLY BE PERMITTED IF SHOWN TO THE SATISFACTION OF THE LOCAL PERMITTING AUTHORITY THAT THE TRANSPORT OF SEDIMENT FROM THE CONSTRUCTION SITE TO RECEIVING WATERS WILL BE PREVENTED THROUGH A COMBINATION OF THE FOLLOWING:
- a) SITE CONDITIONS INCLUDING EXISTING VEGETATIVE COVERAGE, SLOPE, SOIL TYPE, AND PROXIMITY TO RECEIVING WATERS; AND
 - b) LIMITATIONS ON ACTIVITIES AND THE EXTENT OF DISTURBED AREAS; AND
 - c) PROPOSED EROSION AND SEDIMENT CONTROL MEASURES.

BASED ON THE INFORMATION PROVIDED AND/OR ON LOCAL WEATHER CONDITIONS, THE LOCAL PERMITTING AUTHORITY MAY EXPAND OR RESTRICT THE SEASONAL LIMITATION ON SITE DISTURBANCE. THE LOCAL PERMITTING AUTHORITY SHALL TAKE ENFORCEMENT ACTION SUCH AS NOTICE OF VIOLATION, ADMINISTRATIVE ORDER, PENALTY, OR STOP-WORK ORDER UNDER THE FOLLOWING CIRCUMSTANCES;
-IF, DURING THE COURSE OF ANY CONSTRUCTION OR SOIL DISTURBANCE ACTIVITY DURING THE SEASONAL LIMITATION ON SITE DISTURBANCE, SEDIMENT LEAVES THE CONSTRUCTION SITE CAUSING A VIOLATION OF THE SURFACE WATER QUALITY STANDARD, OR
-IF CLEARING AND GRADING LIMITS OR EROSION AND SEDIMENT CONTROL MEASURES SHOWN IN THE APPROVED PLAN ARE NOT MAINTAINED.

THE FOLLOWING ACTIVITIES ARE EXEMPT FROM THE SEASONAL CLEARING AND GRADING LIMITATIONS:

- a) ROUTINE MAINTENANCE AND NECESSARY REPAIR OF EROSION AND SEDIMENT CONTROL BMPs;
- b) ROUTINE MAINTENANCE OF PUBLIC FACILITIES OR EXISTING UTILITY STRUCTURES THAT DO NOT EXPOSE THE SOIL OR RESULT IN THE REMOVAL OF THE VEGETATION COVER TO SOIL, AND
- c) ACTIVITIES WHERE THERE IS ONE HUNDRED PERCENT INFILTRATION OF SURFACE WATER RUNOFF WITHIN THE SITE IN APPROVED AND INSTALLED EROSION AND SEDIMENT CONTROL FACILITIES.

3. COORDINATE WITH UTILITIES AND OTHER CONTRACTORS

THE PRIMARY PROJECT PROPOSER SHALL EVALUATE, WITH INPUT FROM UTILITIES AND OTHER CONTRACTORS, THE STORMWATER MANAGEMENT REQUIREMENTS FOR THE ENTIRE PROJECT, INCLUDING THE UTILITIES, WHEN PREPARING THE CONSTRUCTION SWPPP.

4. INSPECTION AND MONITORING

- a) A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL SHALL BE IDENTIFIED AT THE PRE-CONSTRUCTION MEETING AND SHALL BE ON SITE OR ON CALL AT ALL TIMES. EMERGENCY CONTACT INFORMATION SHALL BE KEPT ON SITE. CERTIFICATION MAY BE THROUGH THE CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL CERTIFICATION PROGRAM OFFERED BY WSDOT, ASSOCIATED GENERAL CONTRACTORS OF WASHINGTON EDUCATION FOUNDATION, OR ANY EQUIVALENT LOCAL OR NATIONAL CERTIFICATION AND/OR TRAINING PROGRAM.
 - b) IF INSPECTION AND/OR WATER MONITORING OF SITE RUNOFF REVEALS THAT THE BMPs IDENTIFIED IN THE CONSTRUCTION SWPPP ARE INADEQUATE, THE CONTRACTOR SHALL IMMEDIATELY ADD BMPs TO THE SWPPP AS NECESSARY.
 - c) MONITORING INCLUDES VISUAL INSPECTION, MONITORING FOR WATER QUALITY PARAMETERS OF CONCERN, AND DOCUMENTATION OF THE INSPECTION AND MONITORING FINDINGS IN A SITE LOG BOOK. A SITE LOG BOOK WILL BE MAINTAINED FOR ALL ON-SITE CONSTRUCTION ACTIVITIES AND WILL INCLUDE:
 - A RECORD OF THE IMPLEMENTATION OF THE SWPPP AND OTHER PERMIT REQUIREMENTS;
 - SITE INSPECTIONS; AND,
 - STORMWATER QUALITY MONITORING.
 - d) SITE INSPECTION WILL OCCUR IN ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND AT ALL STORMWATER DISCHARGE POINTS. STORMWATER WILL BE EXAMINED FOR THE PRESENCE OF SUSPENDED SEDIMENT, TURBIDITY, DISCOLORATION, AND OILY SHEEN. THE SITE INSPECTOR WILL EVALUATE AND DOCUMENT THE EFFECTIVENESS OF THE INSTALLED BMPs AND DETERMINE IF IT IS NECESSARY TO REPAIR OR REPLACE ANY OF THE BMPs TO IMPROVE THE QUALITY OF STORMWATER DISCHARGES. ALL MAINTENANCE AND REPAIRS WILL BE DOCUMENTED IN THE SITE LOG BOOK OR FORMS PROVIDED IN THIS DOCUMENT (THE STORMWATER MANAGEMENT PLAN). ALL NEW BMPs OR DESIGN CHANGES WILL BE DOCUMENTED IN THE SWPPP AS SOON AS POSSIBLE.
 - e) RECORDS OF ALL MONITORING INFORMATION (SITE LOG BOOK, INSPECTION REPORTS/CHECKLISTS, ETC.), THIS STORMWATER POLLUTION PREVENTION PLAN, AND ANY OTHER DOCUMENTATION OF COMPLIANCE WITH PERMIT REQUIREMENTS WILL BE RETAINED DURING THE LIFE OF THE CONSTRUCTION PROJECT AND FOR A MINIMUM OF THREE YEARS FOLLOWING THE TERMINATION OF PERMIT COVERAGE IN ACCORDANCE WITH PERMIT CONDITION 55.C.
5. THE CONSTRUCTION SWPPP SHALL BE RETAINED ON SITE.
- THE CONTRACTOR'S TESC RECORD OF RAINFALL, TESC MEASUREMENTS, AND INSPECTION SHALL BECOME PART OF THE SWPPP. THE CONSTRUCTION SWPPP SHALL BE MODIFIED WHENEVER THERE IS A SIGNIFICANT CHANGE IN THE DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE AT THE CONSTRUCTION SITE.
6. NAMES AND CONTACT INFORMATION FOR THOSE IDENTIFIED AS MEMBERS OF THE POLLUTION PREVENTION TEAM ARE AS FOLLOWS:
- | | |
|--|----------------------------------|
| CERTIFIED EROSION & SEDIMENT CONTROL LEAD (CESCL): | TO BE DETERMINED |
| RESIDENT ENGINEER/EMERGENCY OWNER CONTACT: | WEDEN ENGINEERING (360) 380-1363 |
| EMERGENCY ECOLOGY CONTACT: | KEVIN FITZPATRICK (425) 649-7033 |

AS-BUILTS

																									
WEDEN ENGINEERING, LLC Civil Engineering • Planning • Project Management 2636 Nubgaard Rd., Ferndale, WA 98248 (360) 380-1363 (360) 380-3615 Fx email: info@wedengengineering.com																									
																									
APPROVED DEC 12 2016 BY _____ CITY OF FERNDALE																									
<table><thead><tr><th>No.</th><th>REVISIONS / SUBMISSIONS</th><th>DATE</th></tr></thead><tbody><tr><td></td><td>AS-BUILT INFORMATION</td><td>03/21/16</td></tr><tr><td>4</td><td>REVISIONS PER CITY COMMENTS</td><td>05/28/16</td></tr><tr><td>3</td><td>REVISIONS PER CITY COMMENTS</td><td>04/14/16</td></tr><tr><td>2</td><td>REVISED LOT 72-80 & 86-107</td><td>03/07/16</td></tr><tr><td>1</td><td>REVISIONS PER CITY COMMENTS</td><td>03/02/16</td></tr><tr><td></td><td>REVIEWED BY: EIW</td><td></td></tr><tr><td></td><td>CAD FILE:</td><td></td></tr></tbody></table>		No.	REVISIONS / SUBMISSIONS	DATE		AS-BUILT INFORMATION	03/21/16	4	REVISIONS PER CITY COMMENTS	05/28/16	3	REVISIONS PER CITY COMMENTS	04/14/16	2	REVISED LOT 72-80 & 86-107	03/07/16	1	REVISIONS PER CITY COMMENTS	03/02/16		REVIEWED BY: EIW			CAD FILE:	
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	CAD FILE:																								
PROJECT TITLE THE MEADOWS - PHASE II A PLANNED UNIT DEVELOPMENT THORNTON ROAD FERNDALE, WA																									
DRAWING TITLE SWPPP- EROSION CONTROL PLAN																									
DATE: 01/16/2015 DRAWING No. 5 of 39																									



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GRADING NOTES:

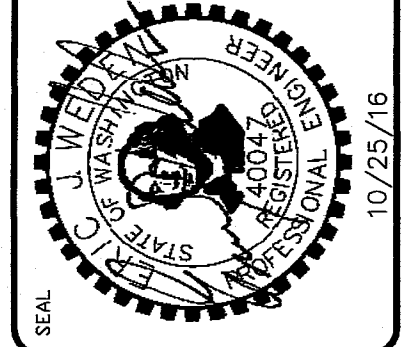
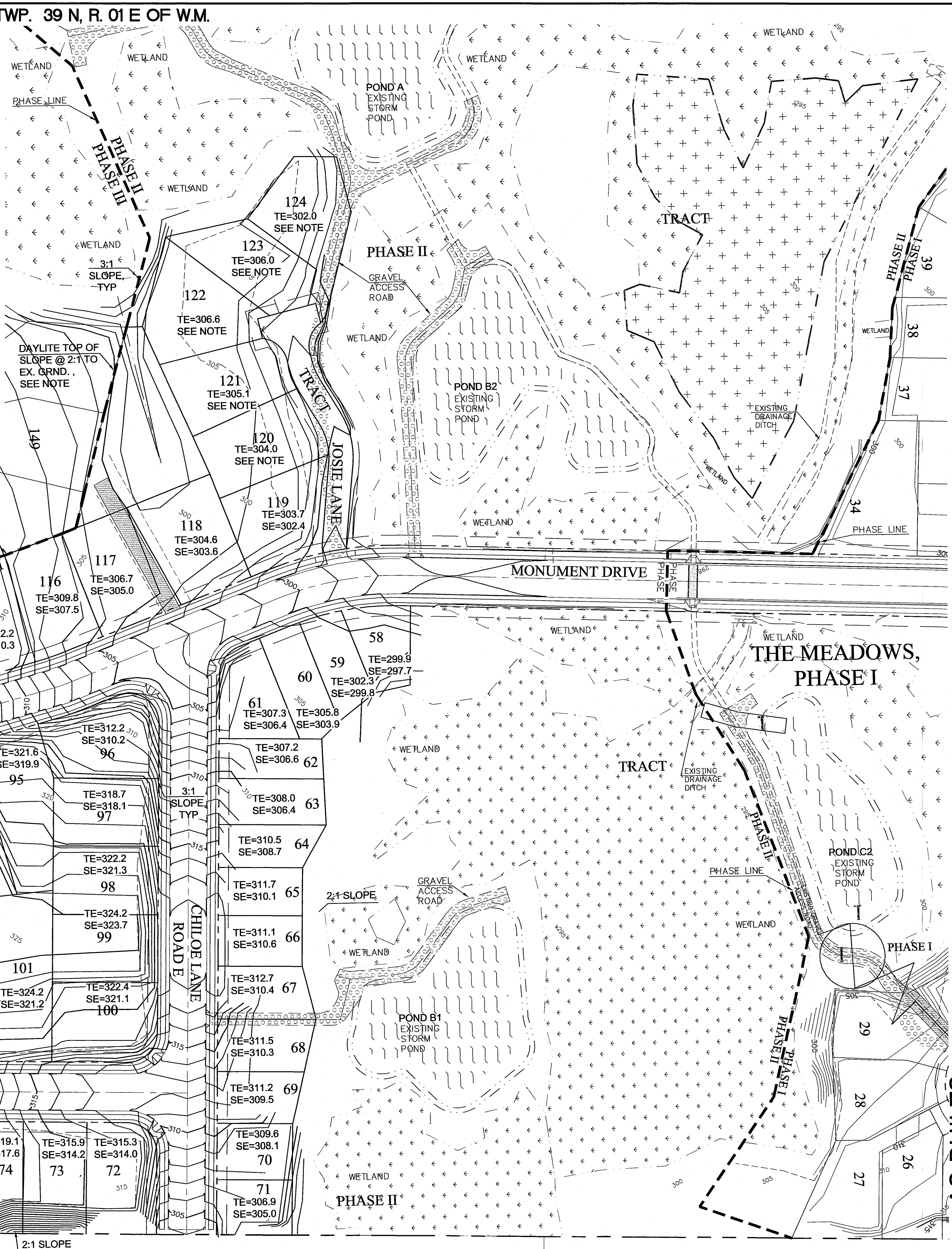
1. TOPSOIL SHALL BE STRIPPED FROM FILL AREAS ON LOTS PRIOR TO PLACEMENT OF STRUCTURAL FILL ON LOTS
2. SUBGRADE SLOPES STEEPER THAN 25% (4:1) AFTER TOPSOIL STRIPPING SHALL BE PROPERLY STEPPED AND KEYED PRIOR TO PLACEMENT OF STRUCTURAL FILL TO PREVENT FUTURE MOVEMENT OF FILL PRISM
3. STRUCTURAL FILL ON LOTS SHALL BE PLACED AT MIN 95% COMPACTION IN 2' LIFTS, OR AS RECOMMENDED BY GEOTECHNICAL ENGINEER. TOPSOIL FILL ON LOTS SHALL BE PLACED AT 85%-90% COMPACTION
4. CONTRACTOR TO PROVIDE CERTIFICATION BY A GEOTECHNICAL ENGINEER OF ADEQUATE LOT COMPACTION WITHIN EACH LOT BUILDING ENVELOPE.
5. AT PHASE II & III LINE, CONTRACTOR TO GRADE PHASE II LOTS AS SHOWN. FROM TOP OF SLOPE CONTRACTOR WILL SLOPE AT 2:1 SLOPE TO EXISTING GROUND.
6. SIDEWALK RAMPS AND DRIVEWAY CUTS ARE NOT REFLECTED IN SHOWN GRADING. AREAS WILL BE ADJUSTED IN FIELD.
7. THE CITY REQUIRES THE MATERIAL TESTING LAB TO SUBMIT TEST REPORTS TO THE ENGINEER OF RECORD, THE CONTRACTOR, AND TO THE CITY. THE CITY REQUIRES THE ENGINEER TO CERTIFY THE PROJECT IS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND THE CITY OF FERDALE DEVELOPMENT STANDARDS FOR PROJECT ACCEPTANCE.

Lot	Top Soil Elevation	Structural Elevation
58	299.9	297.7
59	302.3	299.8
60	305.8	303.9
61	307.3	306.4
62	307.2	306.6
63	308.0	306.4
64	310.5	308.7
65	311.7	310.1
66	311.1	310.6
67	312.7	310.4
68	311.5	310.3
69	311.2	309.5
70	309.6	308.1
71	306.9	305.0
72	315.3	314.0
73	315.9	314.2
74	319.1	317.6
75	325.6	324.2
76	326.9	325.1
77	327.4	325.7
78	327.3	325.5
79	327.8	325.9
80	326.6	324.9
81	326.1	324.3
82	329.9	327.8
83	333.2	332.4
84	339.3	337.7
85	339.1	337.3
86	337.4	336.4
87	338.2	336.3
88	337.5	336.6
89	335.8	334.3
90	334.3	332.9

Lot	Top Soil Elevation	Structural Elevation
91	334.5	333.1
92	333.8	332.1
93	329.8	328.6
94	325.6	324.5
95	321.6	319.9
96	312.2	310.2
97	318.7	318.1
98	322.2	321.3
99	324.2	323.7
100	322.4	321.1
101	324.2	321.2
102	328.0	326.8
103	333.3	332.3
104	335.6	334.4
105	335.1	333.9
106	332.4	331.7
107	330.7	329.6
108	336.8	335.9
109	334.0	332.3
110	332.6	331.0
111	331.5	329.3
112	329.3	328.0
113	324.7	324.0
114	319.6	318.1
115	312.2	310.3
116	309.8	307.5
117	306.7	305.0
118	304.6	303.6
119	303.7	302.4

Lot	Top Soil Elevation	Structural Elevation
120	304.0	See Note
121	305.1	See Note
122	305.6	See Note
123	306.0	See Note
124	302.0	See Note

DUE TO UNDOCUMENTED
FILLS TO LOTS 120-124,
FOUNDATIONS FOR THESE
LOTS WILL REQUIRE
STRUCTURAL
ENGINEERING.



WEDEN ENGINEERING, LLC
Civil Engineering - Planning - Project Management
2636 Nuebard Rd., Ferndale, WA 98248
(360) 380-1363 (360) 384-3615 FX
email: info@wedenengineering.com

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DEC 12 2016
BY: [Signature]
CITY OF FERDALE

No.	REVISIONS / SUBMISSIONS	DATE
1	REVISED PER CITY COMMENTS	05/28/15
2	REVISED PER CITY COMMENTS	05/14/15
3	REVISED PER CITY COMMENTS	04/14/15
4	REVISED LOT 72-80 & 86-107	03/07/15
5	REVISED PER CITY COMMENTS	03/02/15
6	REVIEWED - EIR	
7	CAD FILE	

THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERDALE, WA
GRADING PLAN

DATE: 01/16/2015
DRAWING No.
6 of 39

NOTES:

1. SANITARY SEWER AND STORM SERVICE STUBS TO BE CAPPED AND MARKED PER COF STANDARDS FOR LOCATION AND INVERTS. THE DEPTH OF EACH SEWER STUB SHALL BE CLEARLY NOTED UNDER THE WORD "SEWER" ON EACH STUB WITH PERMANENT PAINT FROM FINISHED GRADE.

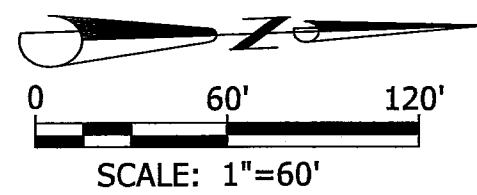
2. CONTRACTOR TO VERIFY EXISTING SANITARY SEWER STUB INVERTS AND MARKINGS. AS-BUILT DRAWINGS SHALL REFLECT EACH SEWER AND STORM STUB INVERT ELEVATION.

3. **[77]** - BOXED LOT NUMBERS INDICATE THAT BOTH THE ROOF AND DRIVEWAY STORM RUNOFF IS ROUTED DIRECTLY TO THE WETLANDS THROUGH A DISPERSION TRENCH. NO STORM SERVICE STUB IS PROVIDED FOR THIS LOT.

4. DO NOT REUSE/RELAY USED PIPE THAT HAS BEEN REMOVED.

STORMWATER FACILITY NOTES:

1. THE GEOTECHNICAL ENGINEER HAS MONITORED CONSTRUCTION OF POND EMBANKMENTS AND CERTIFIES THAT THEY HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS THEREFORE BASED ON THEIR RECOMMENDATIONS THE ENGINEER OF RECORD CAN CERTIFY THAT THE STORMWATER FACILITIES HAVE BEEN CONSTRUCTED IN CONFORMANCE WITH THE 2005 STORMWATER MANAGEMENT MANUAL.



MAXIMUM IMPERVIOUS LOT AREA

LOT	IMPERVIOUS AREA SQUARE FOOT (S.F.)	LOT	IMPERVIOUS AREA SQUARE FOOT (S.F.)
58	4,384	96	8,209
59	4,203	97	7,083
60	4,784	98	7,136
61	5,529	99	3,632
62	4,126	100	3,770
63	4,843	101	6,337
64	4,088	102	5,973
65	3,975	103	5,810
66	4,228	104	5,246
67	4,776	105	4,840
68	4,854	106	3,843
69	4,188	107	5,376
70	4,214	108	6,331
71	4,159	109	9,110
72	3,295	110	8,292
73	3,593	111	7,700
74	3,593	112	7,700
75	3,593	113	4,403
76	3,593	114	4,403
77	4,714	115	4,403
78	3,593	116	4,075
79	3,593	117	8,488
80	3,621	118	9,032
81	8,104	119	8,254
82	10,355	120	8,290
83	10,385	121	7,868
84	6,112	122	8,966
85	6,209	123	7,546
86	4,449	124	8,478
87	3,995		
88	3,995		
89	3,995		
90	3,995		
91	4,057		
92	4,566		
93	5,083		
94	5,530		
95	9,176		

LOTS REQUIRING LID DISPERSION TRENCHES TO BE PLACED DURING RESIDENTIAL BUILDING DESIGN

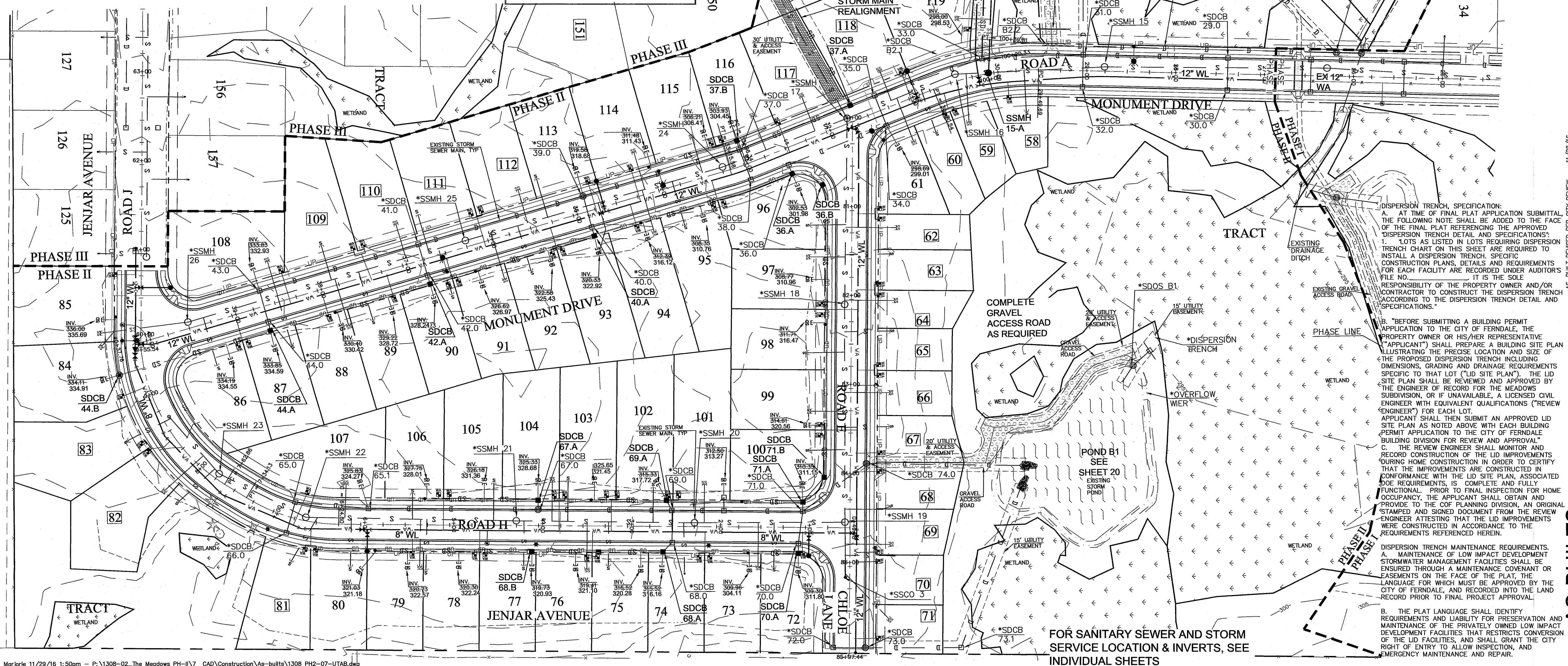
LOT	IMPERVIOUS COVERAGE SQUARE FOOT (S.F.)
58	4,384
59	4,203
60	4,784
61	5,529
62	4,126
63	4,843
64	4,088
65	3,975
66	4,228
67	4,776
68	4,854
69	4,188
70	4,214
71	4,159
81	8,104
82	10,355
83	10,385
109	9,110
110	8,292
111	7,700
112	7,700
117	8,488
118	9,032
121	7,868
122	8,966
123	7,546
124	8,478



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MAXIMUM IMPERVIOUS LOT AREA IS CALCULATED FROM BUILDING ENVELOPE WITH 20', 10' AND 15' SETBACKS AND A 20' DRIVE. THE MAXIMUM IMPERVIOUS LOT AREA TABLE PROVIDED ON THIS PLAN SHEET ACCURATELY REFLECTS CHANGES MADE TO THE UPDATED OCT 24, 2016 MEADOWS STORM REPORT.



FOR SANITARY SEWER AND STORM
SERVICE LOCATION & INVERTS, SEE
INDIVIDUAL SHEETS

AS-BUILTS

THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERDALE, WA
OVERALL UTILITY PLAN

DATE: 01/16/2015

DRAWING No.

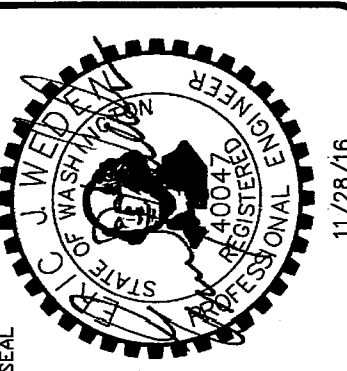
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NO.	REVISIONS / SUBMISSIONS	DATE
5	REVISIONS PER CITY COMMENTS	06/10/15
4	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
2	REVISED LOT 72-80 & 86-107	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15
	REVIEWED BY: EIW	
	DRAWN BY: KLS	
	CAD FILE: 1308-02	

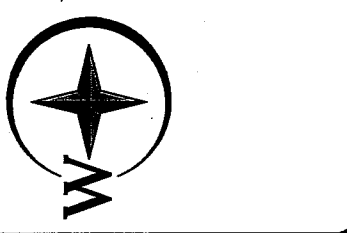
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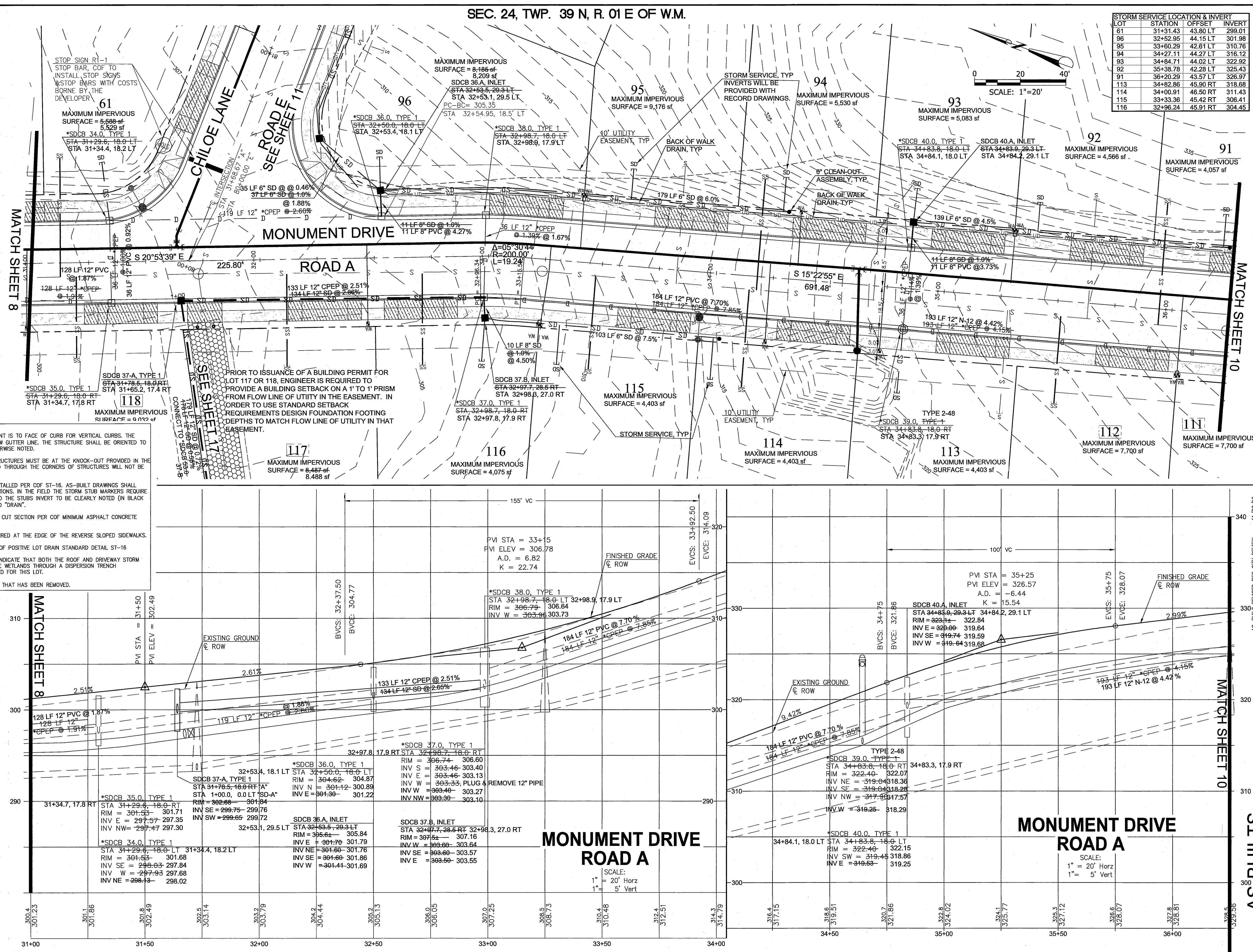
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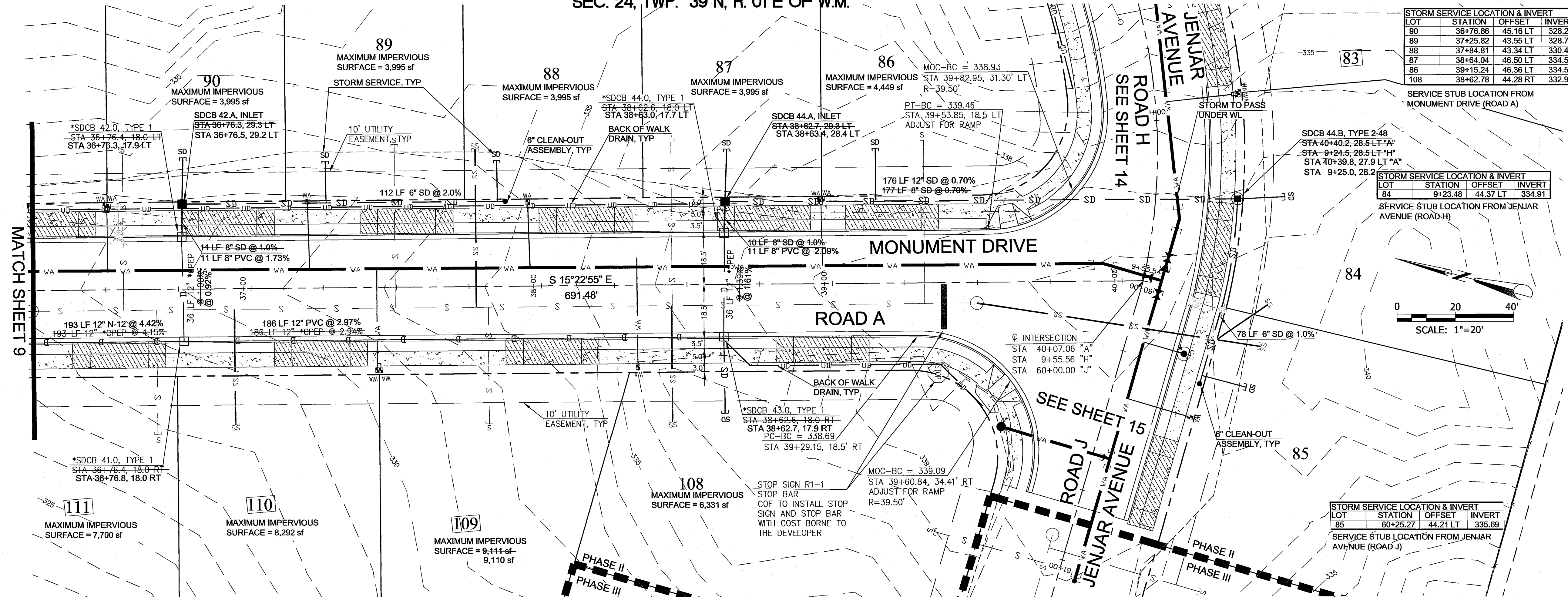
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- NOTES:
1. CATCH BASIN OFFSET MEASUREMENT IS TO FACE OF CURB FOR VERTICAL CURBS. THE GRATE ELEVATION IS SET 0.10' BELOW GUTTER LINE. THE STRUCTURE SHALL BE ORIENTED TO THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.
 2. STORM PIPE CONNECTIONS TO STRUCTURES MUST BE AT THE KNOCK-OUT PROVIDED IN THE STRUCTURE. CONNECTIONS PROPOSED THROUGH THE CORNERS OF STRUCTURES WILL NOT BE APPROVED IN THE FIELD.
 3. STORM SERVICE STUBS TO BE INSTALLED PER COF ST-16. AS-BUILT DRAWINGS SHALL REFLECT STORM STUB INVERT ELEVATIONS. IN THE FIELD THE STORM STUB MARKERS REQUIRE THE DEPTH FROM FINISHED GRADE TO THE STUBS INVERT TO BE CLEARLY NOTED (IN BLACK PERMANENT PAINT) UNDER THE WORD "DRAIN".
 4. INSTALL BACK OF WALK DRAIN IN CUT SECTION PER COF MINIMUM ASPHALT CONCRETE SECTION LOCAL STREET DETAIL R-4.
 5. NO CURTAIN DRAIN WILL BE REQUIRED AT THE EDGE OF THE REVERSE SLOPED SIDEWALKS.
 6. FOR LOT STORM SERVICES, SEE COF POSITIVE LOT DRAIN STANDARD DETAIL ST-16
 7. 117 - BOXED LOT NUMBERS INDICATE THAT BOTH THE ROOF AND DRIVEWAY STORM RUNOFF IS ROUTED DIRECTLY TO THE WETLANDS THROUGH A DISPERSION TRENCH. NO STORM SERVICE STUB IS PROVIDED FOR THIS LOT.
 8. DO NOT REUSE/RELAY USED PIPE THAT HAS BEEN REMOVED.



SEC. 24, TWP. 39 N, R. 01 E OF W.M.

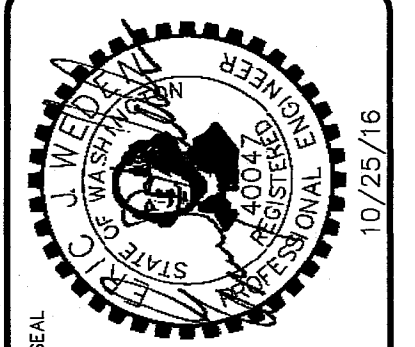


LOT	STATION	OFFSET	INVERT
90	36+76.86	45.16 LT	328.24
89	37+25.82	43.55 LT	328.72
88	37+64.81	43.34 LT	330.42
87	38+64.04	46.50 LT	334.59
86	39+15.24	46.36 LT	334.55
108	38+62.78	44.28 RT	332.93

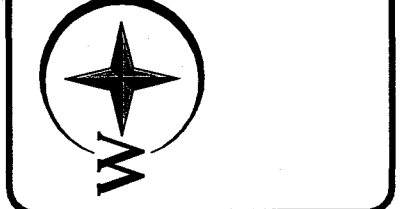
LOT	STATION	OFFSET	INVERT
84	9+23.48	44.37 LT	334.91

LOT	STATION	OFFSET	INVERT
85	60+25.27	44.21 LT	335.69

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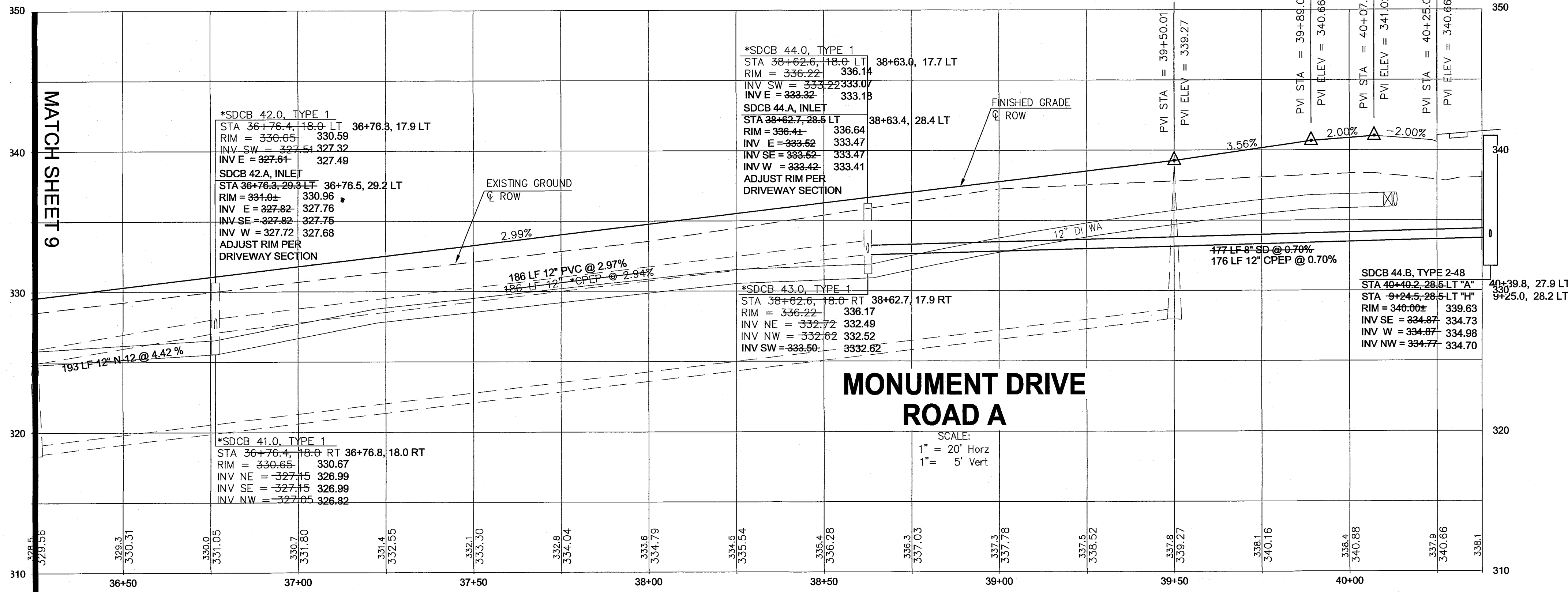


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NO.	REVISIONS / SUBMISSIONS	DATE
1	AS-BUILT INFORMATION	03/21/16
2	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15

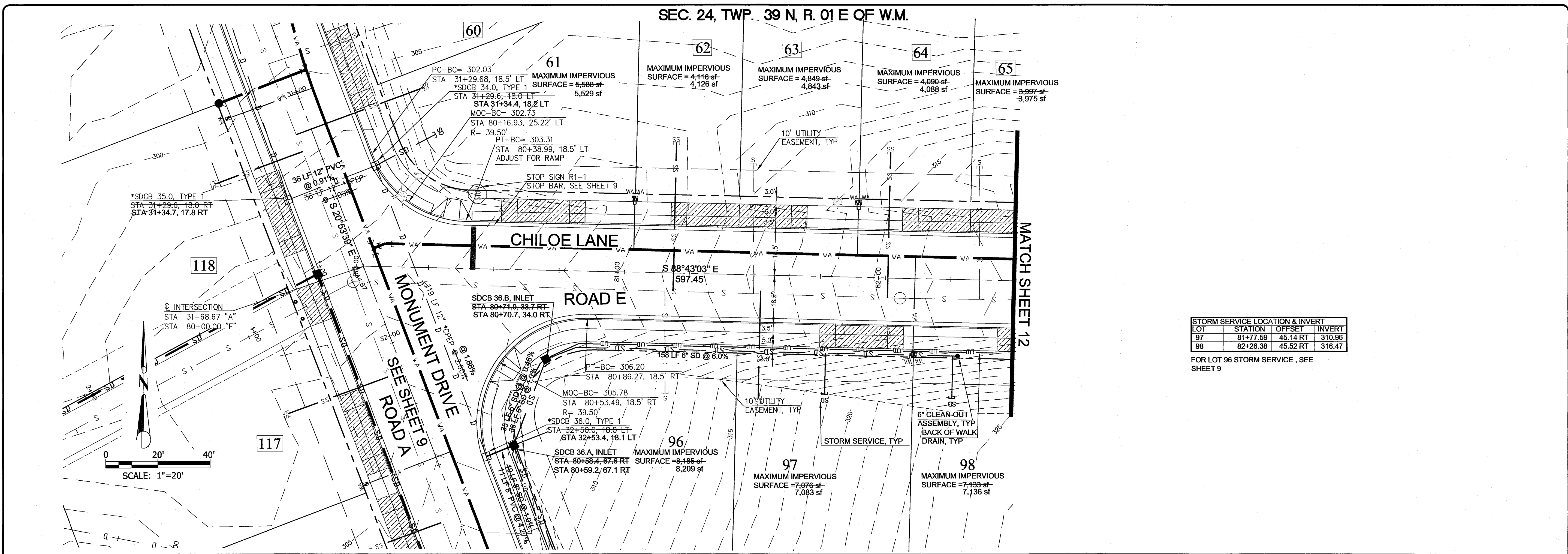
AS-BUILTS
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERDALE, WA
DRAWING TITLE
ROAD A PLAN & PROFILE

DATE: 01/16/2015
DRAWING No.
10 of 39



- NOTES:
- CATCH BASIN OFFSET MEASUREMENT IS TO FACE OF CURB FOR VERTICAL CURBS. THE GRADE ELEVATION IS SET 0.10' BELOW GUTTER LINE. THE STRUCTURE SHALL BE ORIENTED TO THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.
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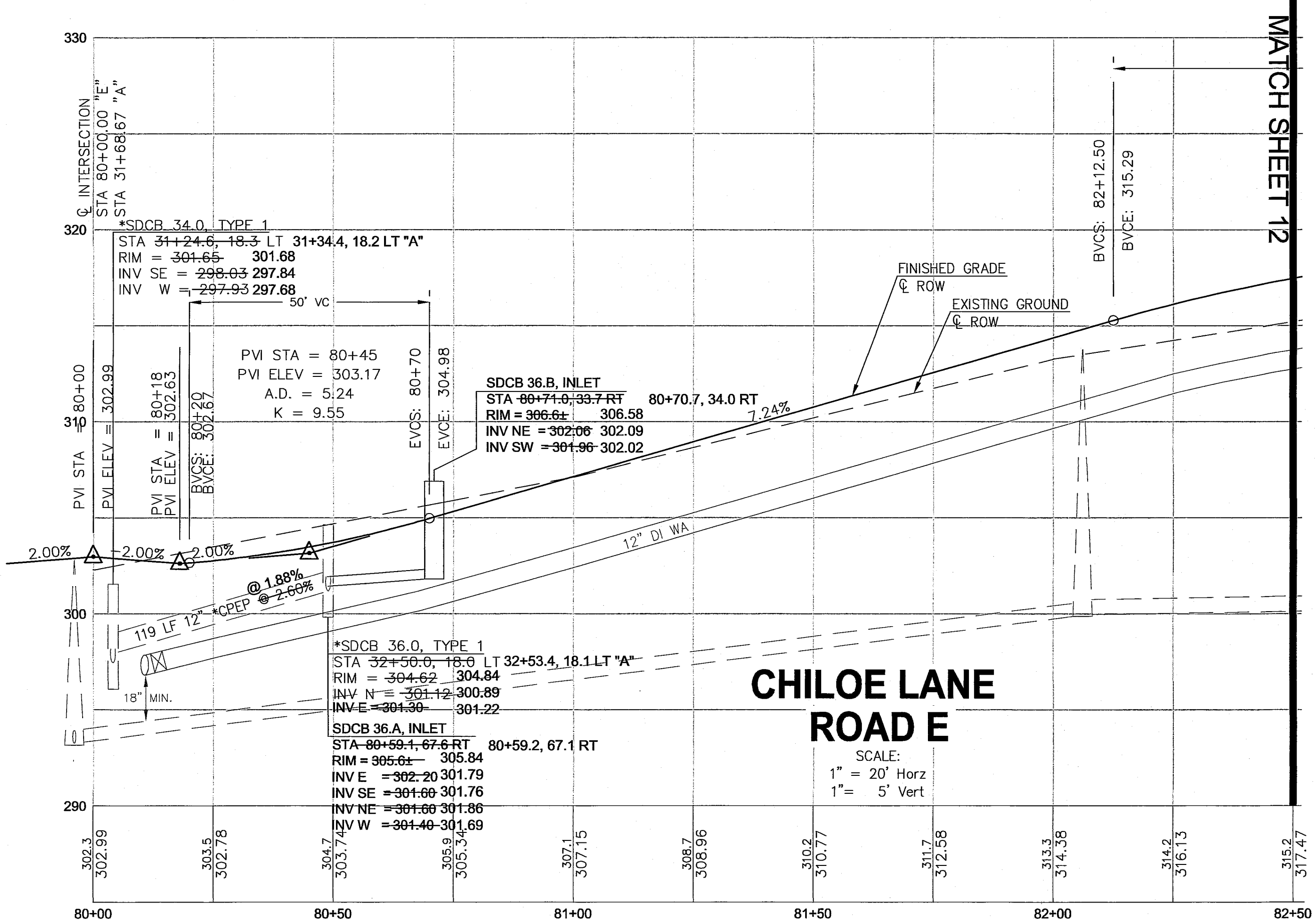
kenny 10/25/16 12:48pm - P:\308-02_The Meadows PH-II\308 PH2-10-ROAD.dwg



LOT	STATION	OFFSET	INVERT
97	81+77.59	45.14 RT	310.96
98	82+26.38	45.52 RT	316.47

FOR LOT 96 STORM SERVICE, SEE SHEET 9

- NOTES:
1. CATCH BASIN OFFSET MEASUREMENT IS TO FACE OF CURB FOR VERTICAL CURBS. THE GRATE ELEVATION IS SET 0.10' BELOW GUTTER LINE. THE STRUCTURE SHALL BE ORIENTED TO THE ROAD CENTERLINE UNLESS OTHERWISE NOTED.
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AS-BUILT RE

NO.	REVISIONS / SUBMISSIONS	DATE
4	AS-BUILT INFORMATION	03/21/16
3	REVISIONS PER CITY COMMENTS	05/28/15
2	REVISIONS PER CITY COMMENTS	04/14/15
1	REVISIONS PER CITY COMMENTS	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15

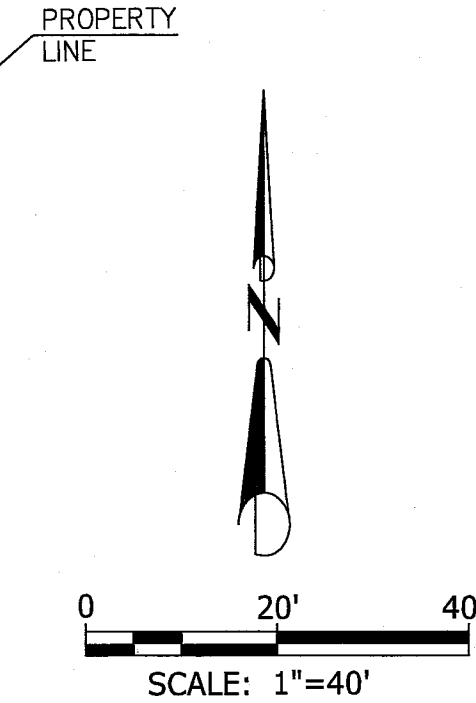
DRAWN: KLS
CHECKED: EJJW
PROJECT NO.: 1308-02

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA

DRAWING TITLE
ROAD E PLAN & PROFILE

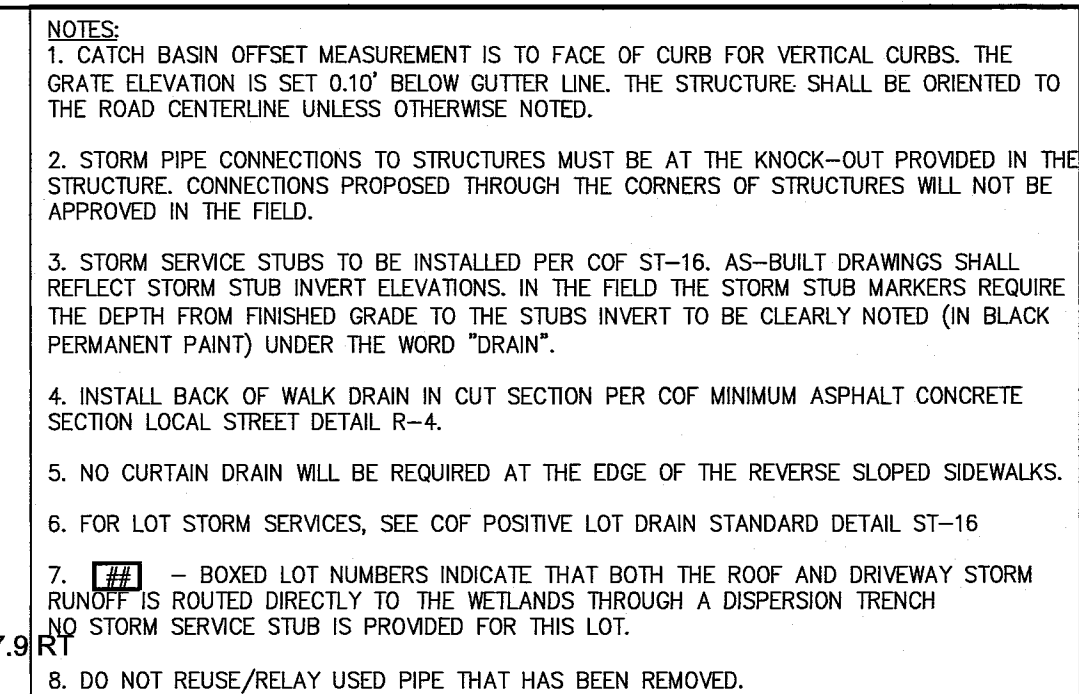
DATE: 01/16/2015
DRAWING No.
11 of 39

00609.011 12/23/16 ST



STORM SERVICE LOCATION & INVERT			
LOT	STATION	OFFSET	INVERT
99	83+41.46	46.74 RT	320.56

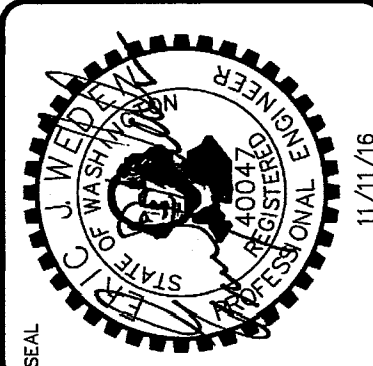
FOR LOT 72 & 100 STORM SERVICES, SEE SHEET 13





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Revisions / Submissions	Date
AS-BUILT INFORMATION	03/21/18
4 REVISIONS PER CITY COMMENTS	05/28/15
3 REVISIONS PER CITY COMMENTS	04/14/15
2 REVISED LOT 72-80 & 88-107	03/07/15
1 REVISIONS PER CITY COMMENTS	03/02/15

DRAWN : KLS
 REVIEWED : E.W.J.

CAD FILE :
 PROJECT NO. : 1308-02

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA
DRAWING TITLE
ROAD E PLAN & PROFILE

DATE : 01/16/2015
DRAWING No.

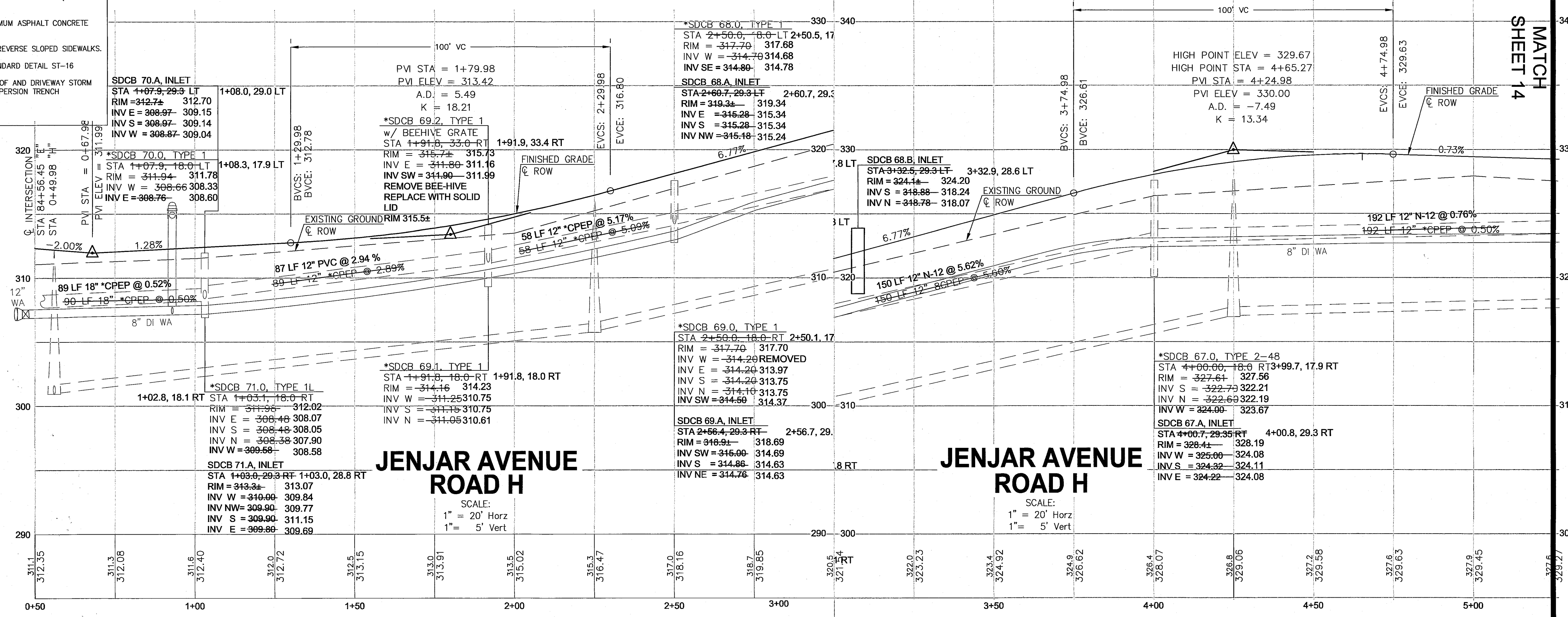
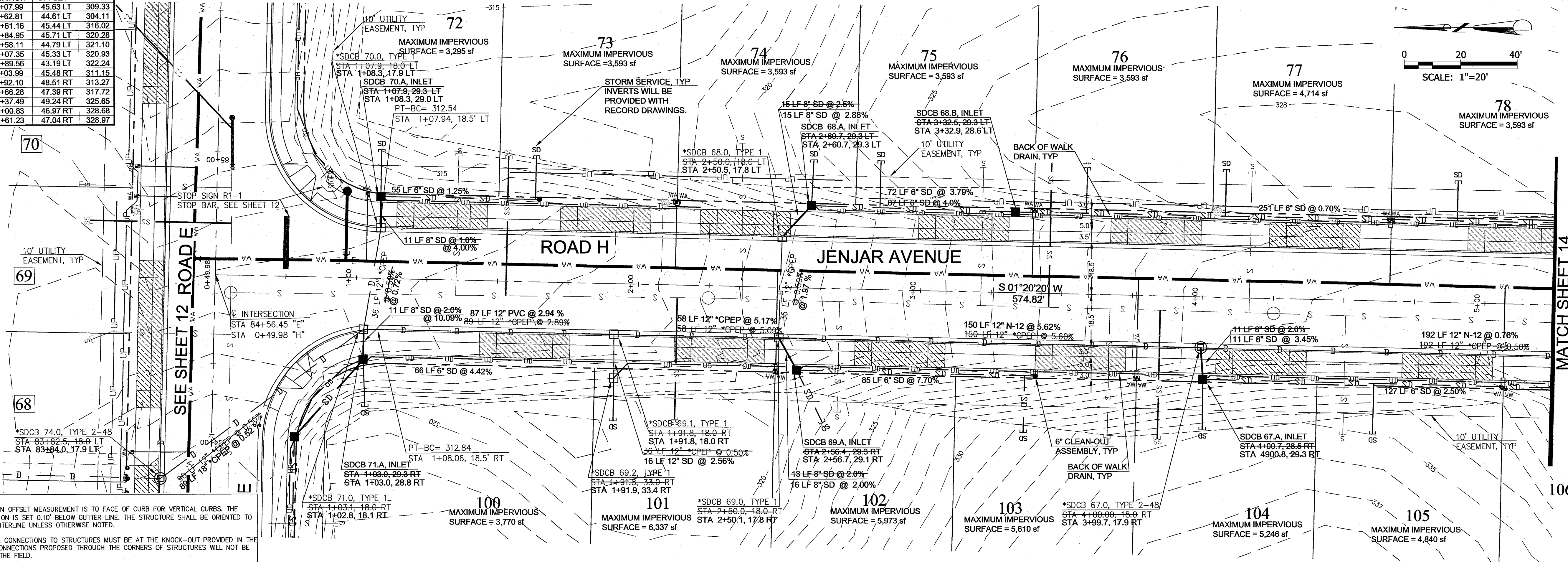
00600.012 12/23/16 84

STORM SERVICE LOCATION & INVERT			
LOT	STATION	OFFSET	INVERT
72	1+07.99	45.63 LT	309.33
73	1+62.81	44.61 LT	304.11
74	2+61.16	45.44 LT	316.02
75	2+84.95	45.71 LT	320.28
76	3+58.11	44.79 LT	321.10
77	4+07.35	45.33 LT	320.93
78	4+88.56	43.19 LT	322.24
100	1+03.99	45.48 RT	311.15
101	1+92.10	48.51 RT	313.27
102	2+66.28	47.39 RT	317.72
103	3+37.49	49.24 RT	325.65
104	4+00.83	46.97 RT	328.68
105	4+61.23	47.04 RT	328.97

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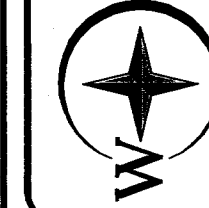
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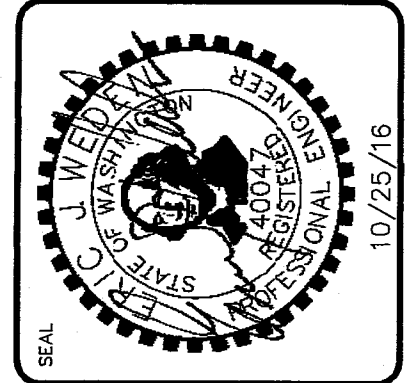
NO.	REVISIONS / SUBMISSIONS	DATE
1	AS-BUILT INFORMATION	03/21/16
2	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15

PROJECT TITLE
**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA**

DRAWING TITLE
ROAD H PLAN & PROFILE

DATE: 01/16/2015
DRAWING NO.

STORM SERVICE LOCATION & INVERT			
LOT	STATION	OFFSET	INVERT
79	5+47.26	44.12 LT	322.48
80	5+98.98	49.50 LT	321.18
84	9+23.48	44.37 LT	334.91
107	5+99.99	44.26 RT	324.27



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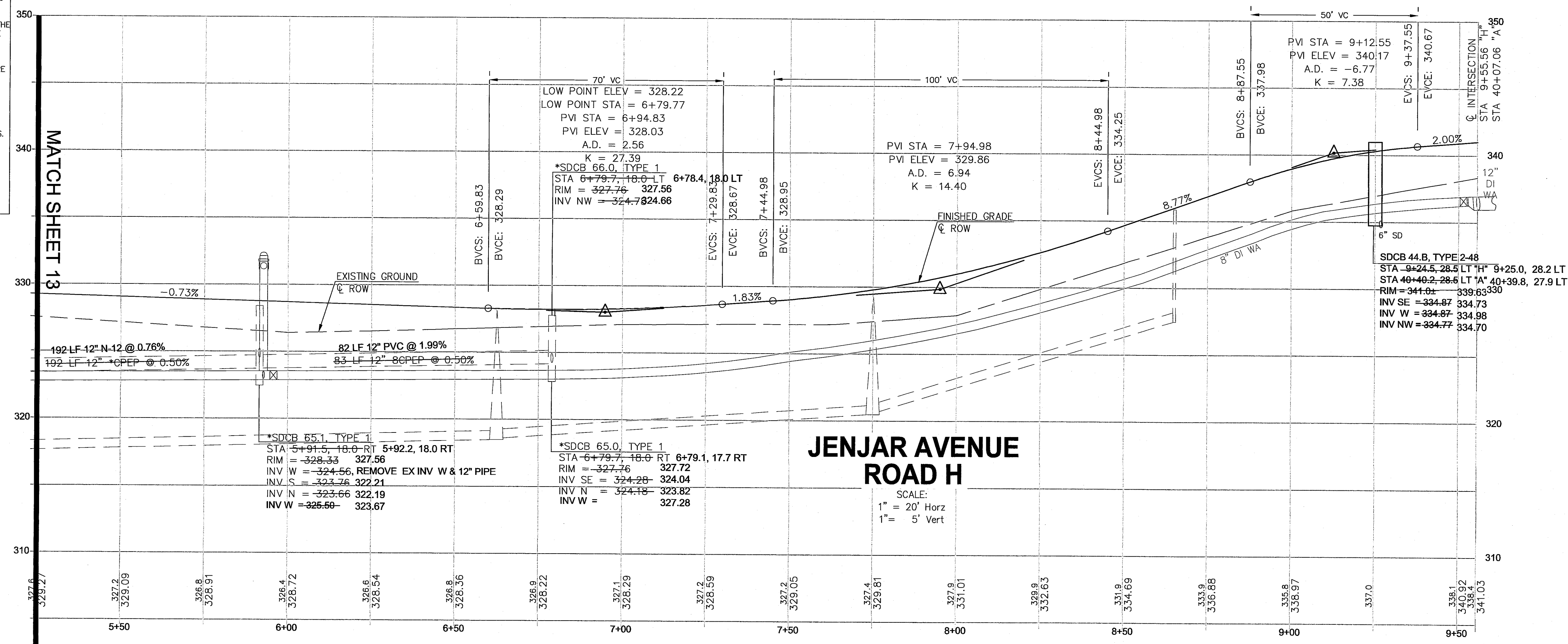
CITY OF FERNDALE

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AS-BUILTS

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**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA**

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ROAD H PLAN & PROFILE

DATE : 01/16/2015
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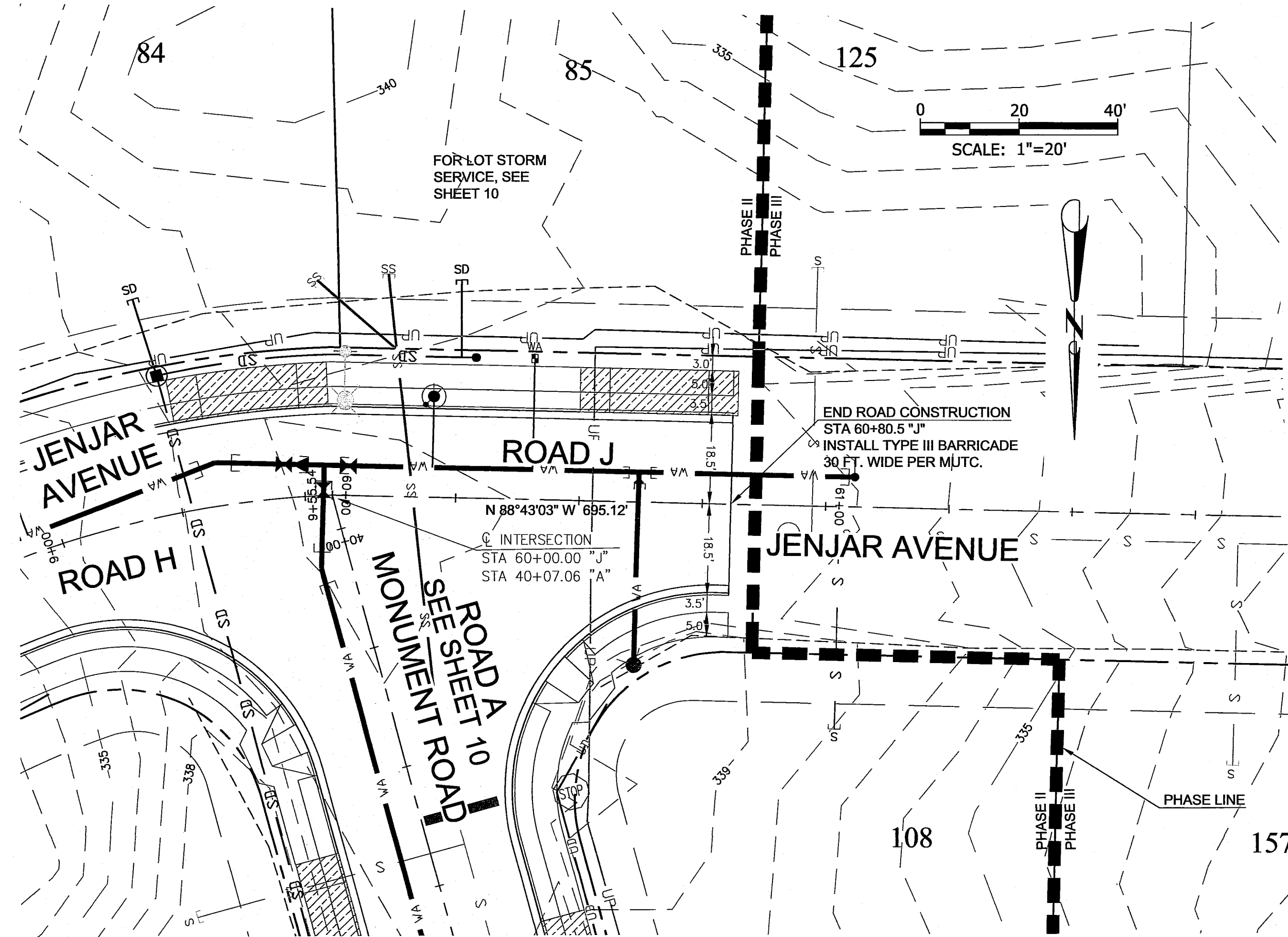
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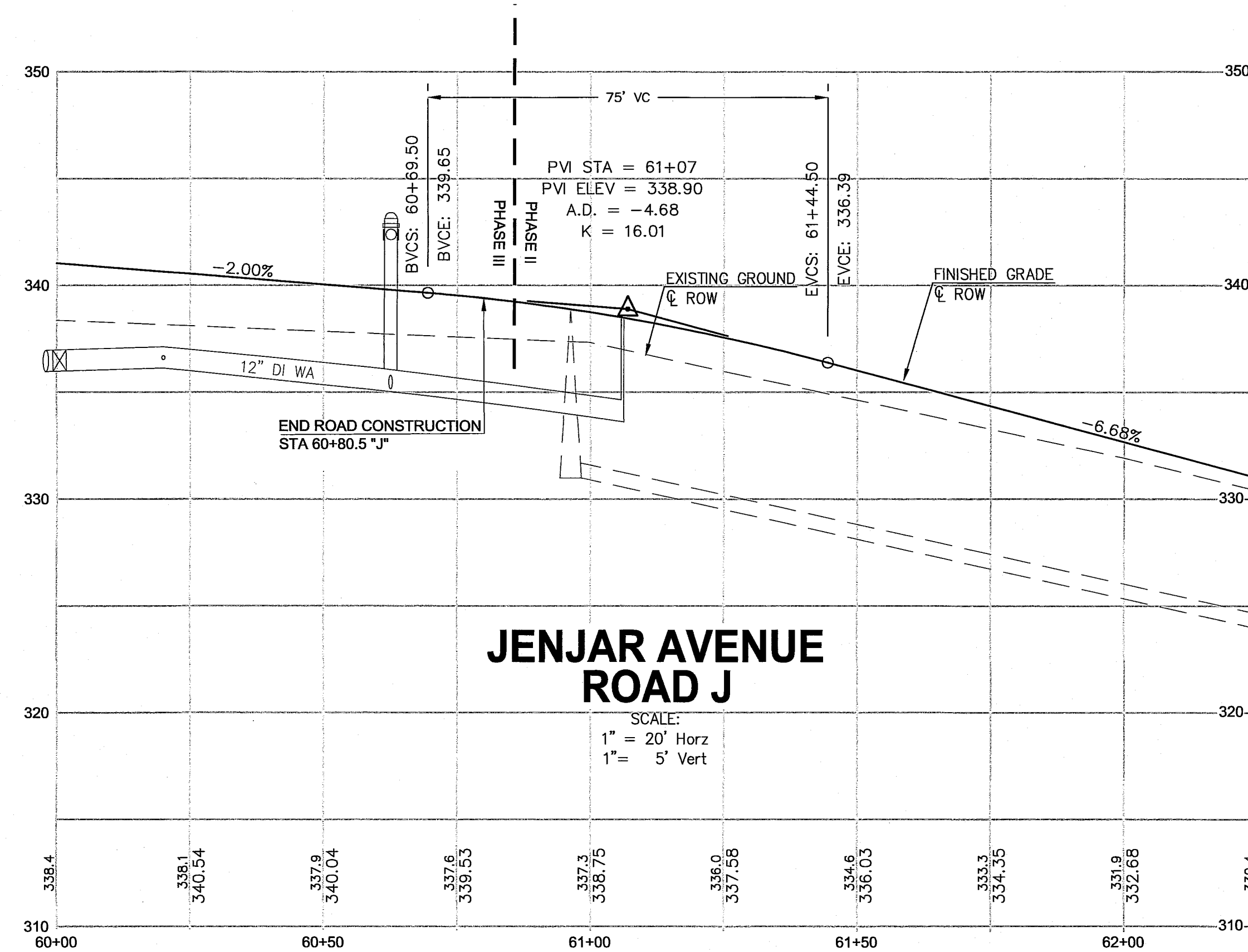


STORM SERVICE LOCATION & INVERT			
LOT	STATION	OFFSET	INVERT
84	9+23.48	44.37 LT	334.91

STORM SERVICE LOCATION FROM JENJAR AVENUE (ROAD H)

STORM SERVICE LOCATION & INVERT			
LOT	STATION	OFFSET	INVERT
85	60+25.27	44.21 LT	335.69

STORM SERVICE LOCATION FROM JENJAR AVENUE (ROAD J)



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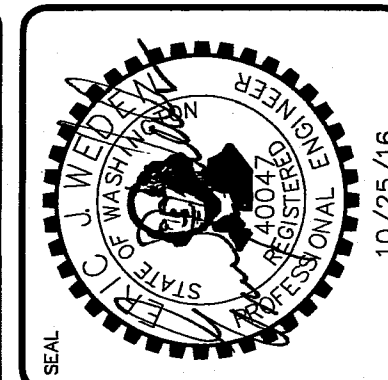
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PROJECT TITLE
THE MEADOWS - PHASE II
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DRAWING TITLE
ROAD J PLAN & PROFILE

DATE : 01/16/2015
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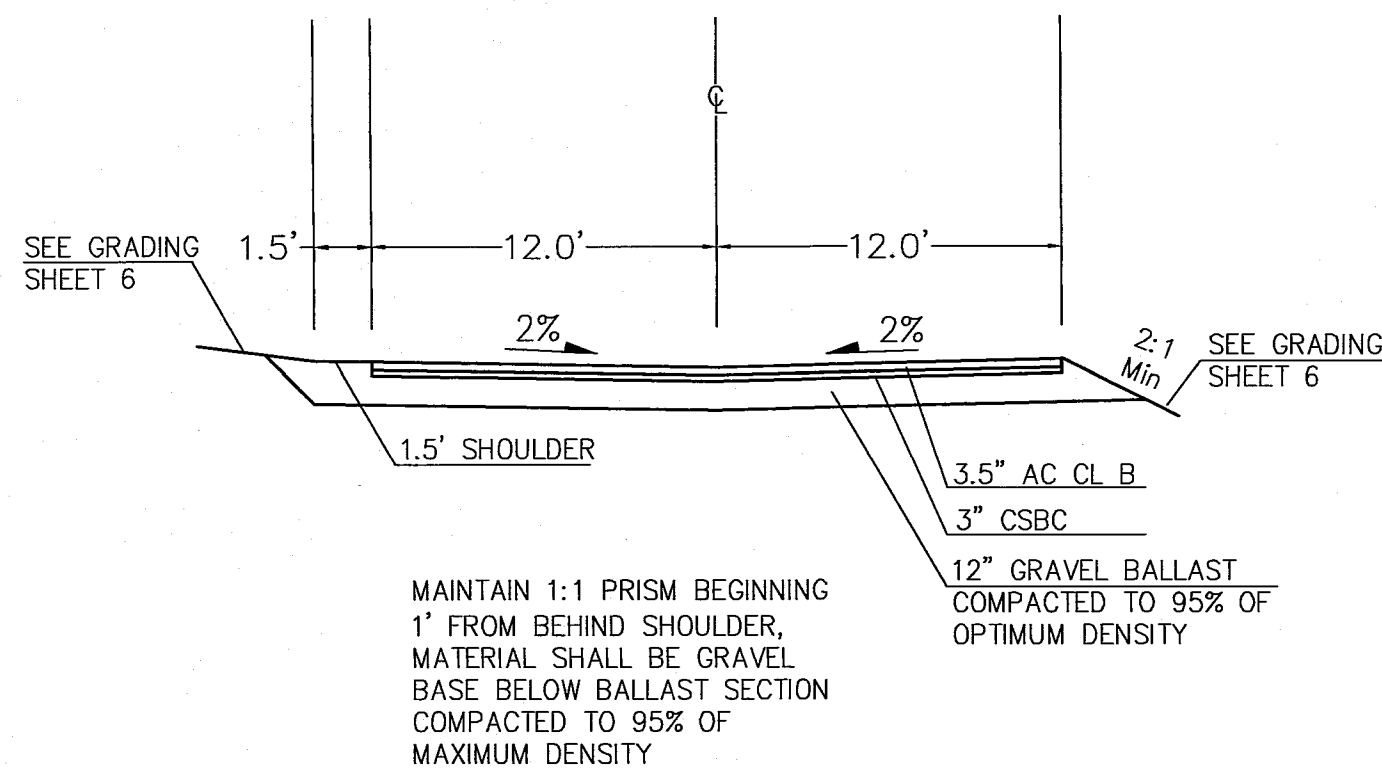
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AS-BUILT REVISED PER CITY REVIEW		10/13/16	
No.	REVISIONS / SUBMISSIONS	DATE	REVIEWED
4	AS-BUILT INFORMATION	03/21/16	
3	REVISIONS PER CITY COMMENTS	05/28/15	
4	REVISIONS PER CITY COMMENTS	04/14/15	
2	REVISIONS PER CITY COMMENTS	03/07/15	
1	REVISIONS PER CITY COMMENTS	03/02/15	
REVIEWED : E/W		DRAWN : KLS	
CAD FILE :		PROJECT NO. : 1308-02	

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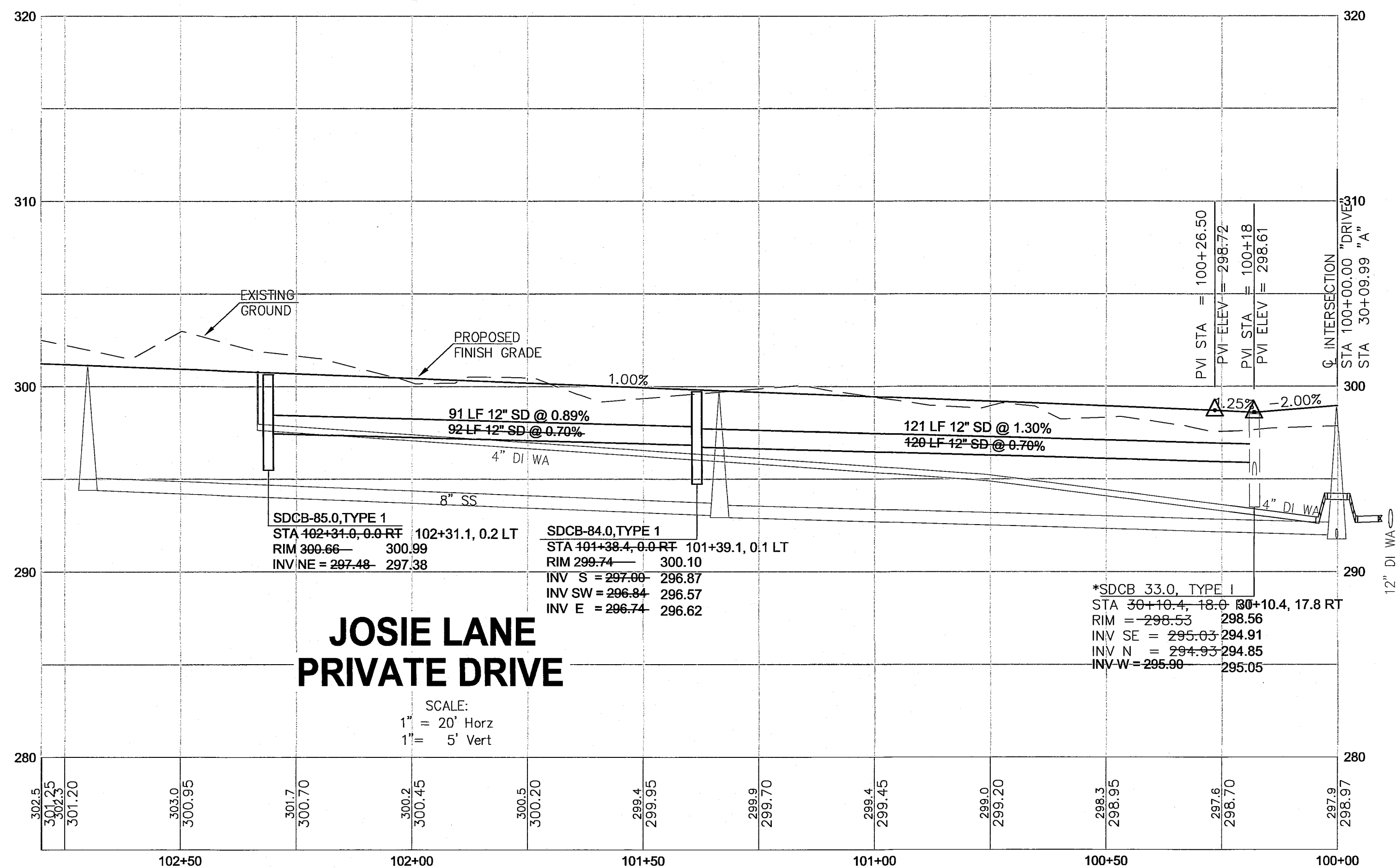
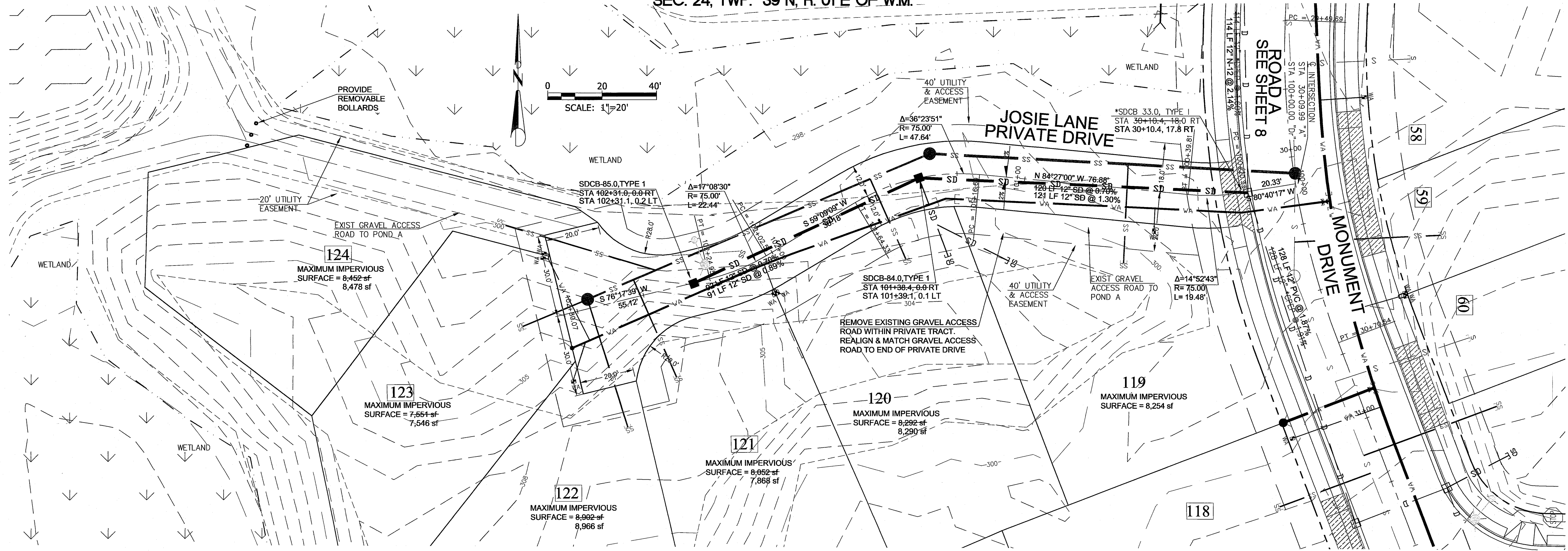
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PRIVATE STREET SECTION, TYP
N.T.S.

SEC. 24, TWP. 39 N, R. 01 E OF W.M.



STORM SERVICE LOCATION & INVERT			
LOT	STATION	OFFSET	INVERT
119	101+03.10	30.63 LT	298.53
120	101+31.30	30.26 LT	299.52


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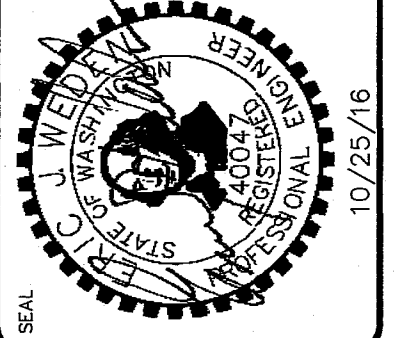
AS-BUILTS

PROJECT TITLE
**THE MEADOWS - PHASE II
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THORNTON ROAD
FERNDALE, WA**

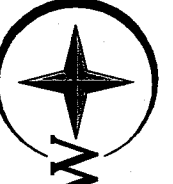
DRAWING TITLE
PRIVATE DRIVE PLAN & PROFILE

DATE : 01/16/2015
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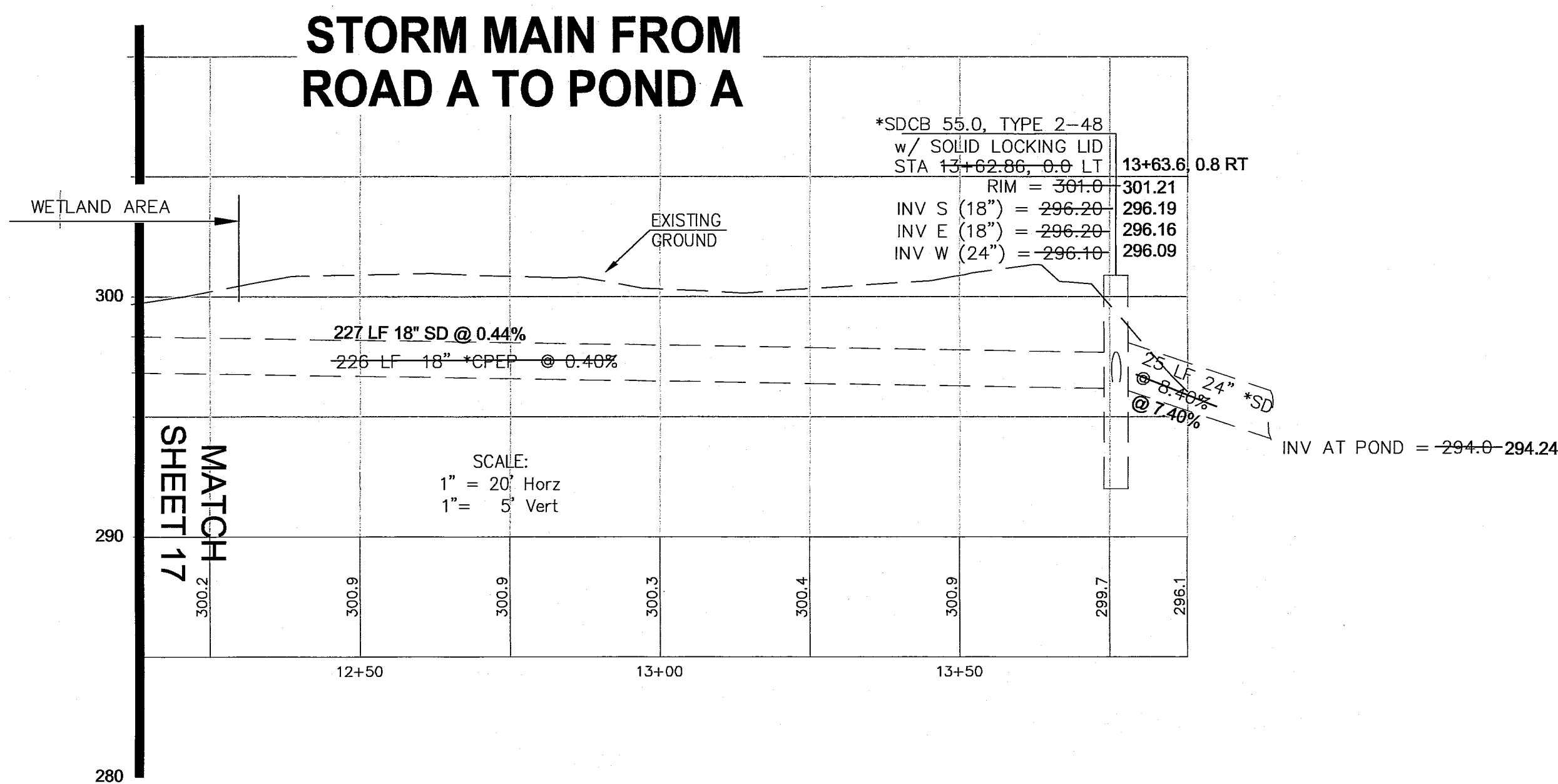
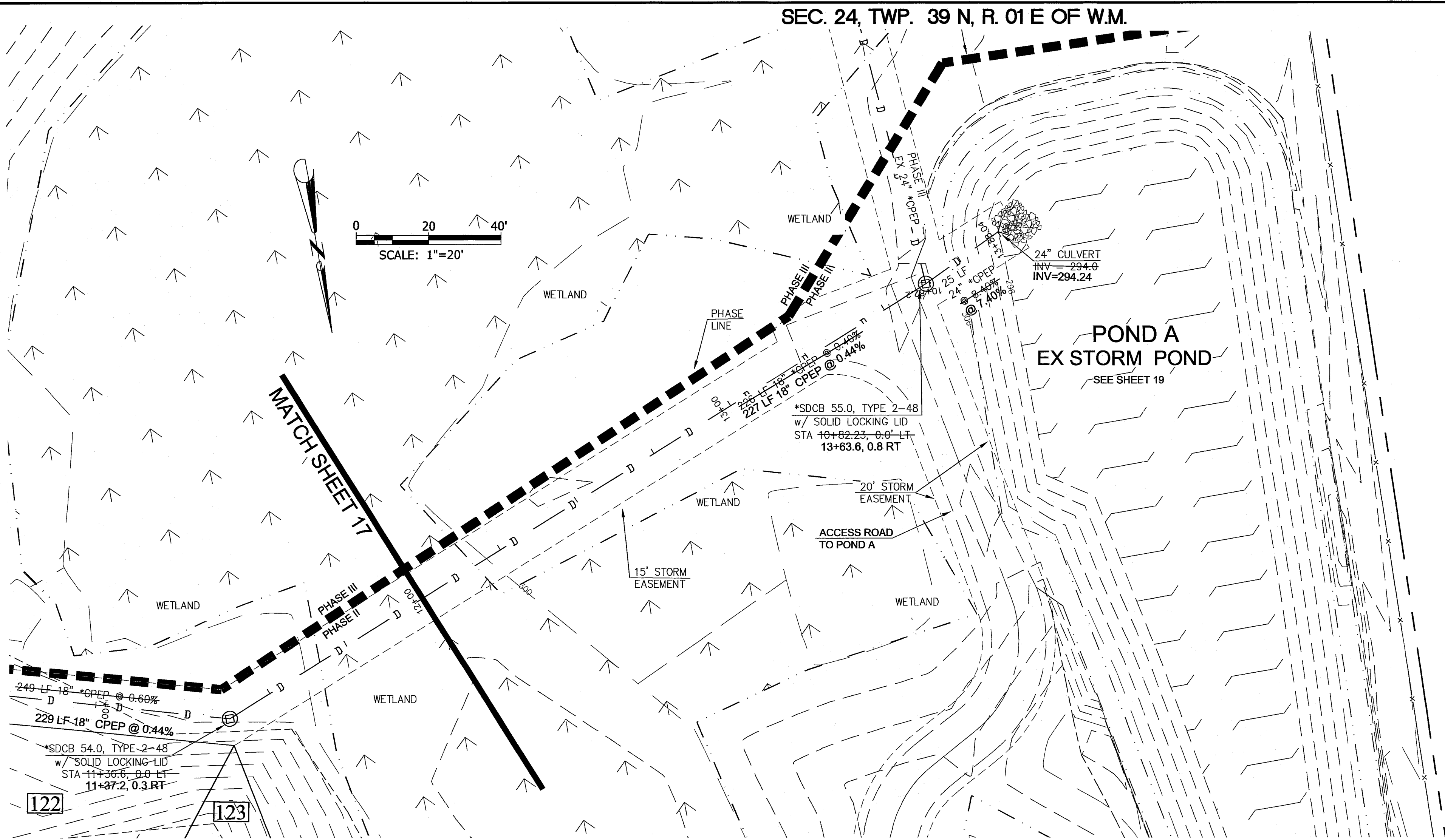
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AS-BUILT REVISED PER CITY REVIEW		DATE	
No.	REVISIONS / SUBMISSIONS	DATE	DATE
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1	REVISIONS PER CITY COMMENTS	03/07/15	
1	REVISIONS PER CITY COMMENTS	03/02/15	
REVIEWED: E.W.		DRAWN: KLS	
CAD FILE:		PROJECT NO.: 1308-02	

12/26/16
11/26/16
11/26/16

kenny 10/24/16 1:26pm - P:\1308-02_The Meadows PH-II\7 CAD\Construction\As-Built\1308 PH2-18-SDAB.dwg



AS-BUILTS

AS-BUILT REVISED PER CITY COMMENTS 10/13/16

No.	REVISIONS/ SUBMISSIONS	DATE
4	AS-BUILT INFORMATION	03/21/16
3	REVISIONS PER CITY COMMENTS	05/28/15
2	REVISIONS PER CITY COMMENTS	04/14/15
1	REVISED LOT 72-80 & 86-107	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15
REVIEWED BY: EJM		BRAWN: KLS
CAD FILE:		PROJECT NO.: 1308-02

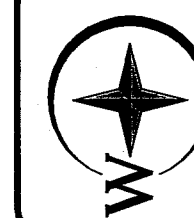
PROJECT TITLE
**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA**

DRAWING TITLE
STORM MAIN PLAN & PROFILE

DATE: 01/16/2015
DRAWING No.

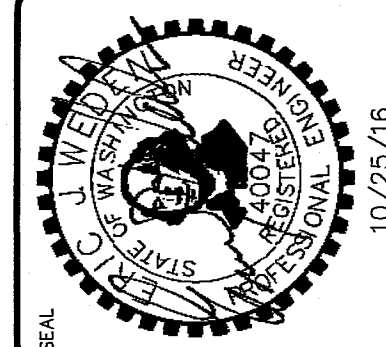
18 of 39

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email: info@wedenengineering.com



00608.018 12/23/16 8H

kenny 10/24/16 1:58pm - P:\1308-02_The Meadows PH-II\7 CAD\Construction\As-Built\1308 PH2-19-SDAB Pond A.dwg

CONTRACTOR TO INSTALL OUTLET STRUCTURE FLOW MANIFOLD, COMPLETE ALL STORM INFRASTRUCTURE AND ACCESS ROADS

ANY PORTION OF POND ACCESS ROADS TO BE COMPLETED WILL BE BUILT TO A 15' WIDTH.

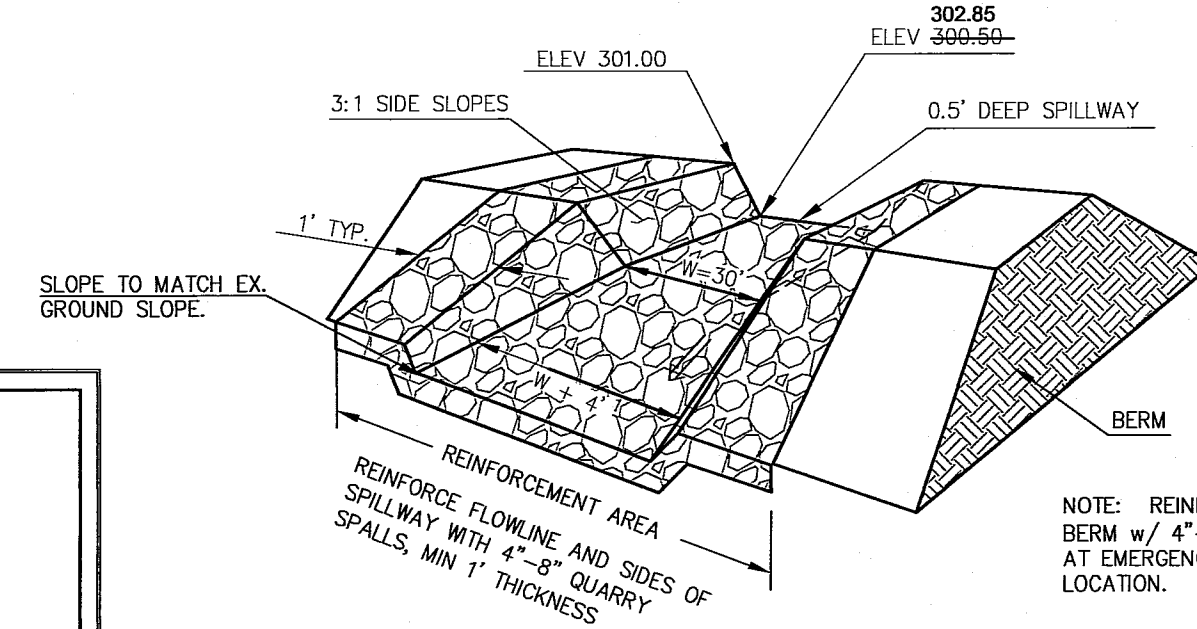
SEE SHEET 34 FOR POND EMBANKMENT CONSTRUCTION NOTES AND ACCESS ROAD SECTIONS

PROVIDE REMOVABLE BOLLARDS AS SHOWN ON ACCESS ROAD



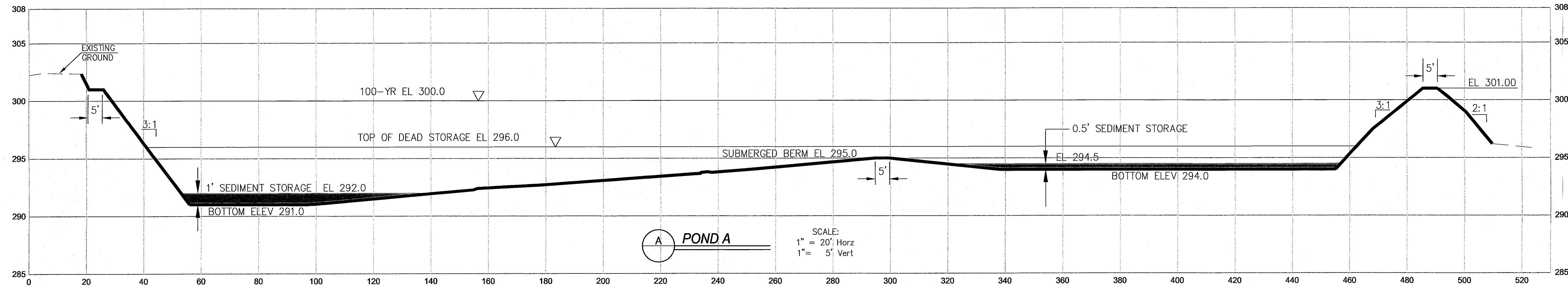
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1-800-424-5555

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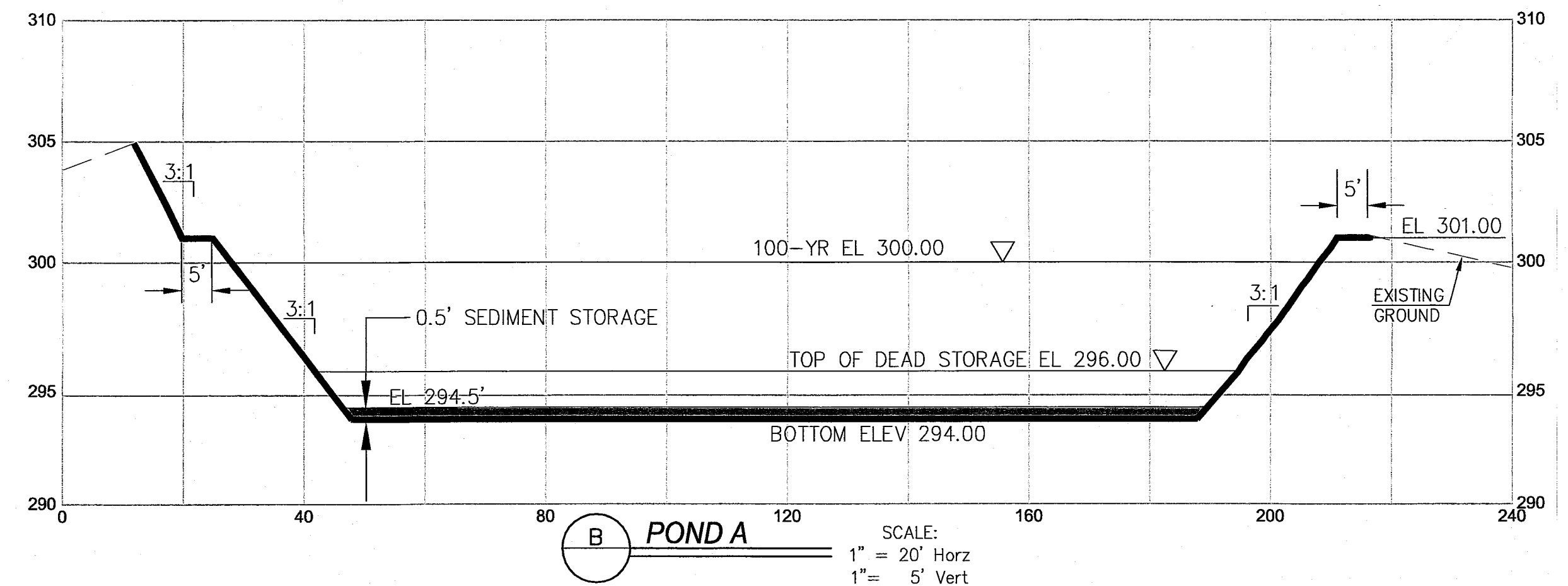
EMERGENCY OVERFLOW WEIR
REFERENCE 2005 DOE MANUAL
VOL III, SECTION 3.2

N.T.S.



A POND A

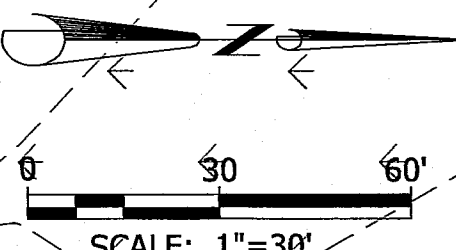
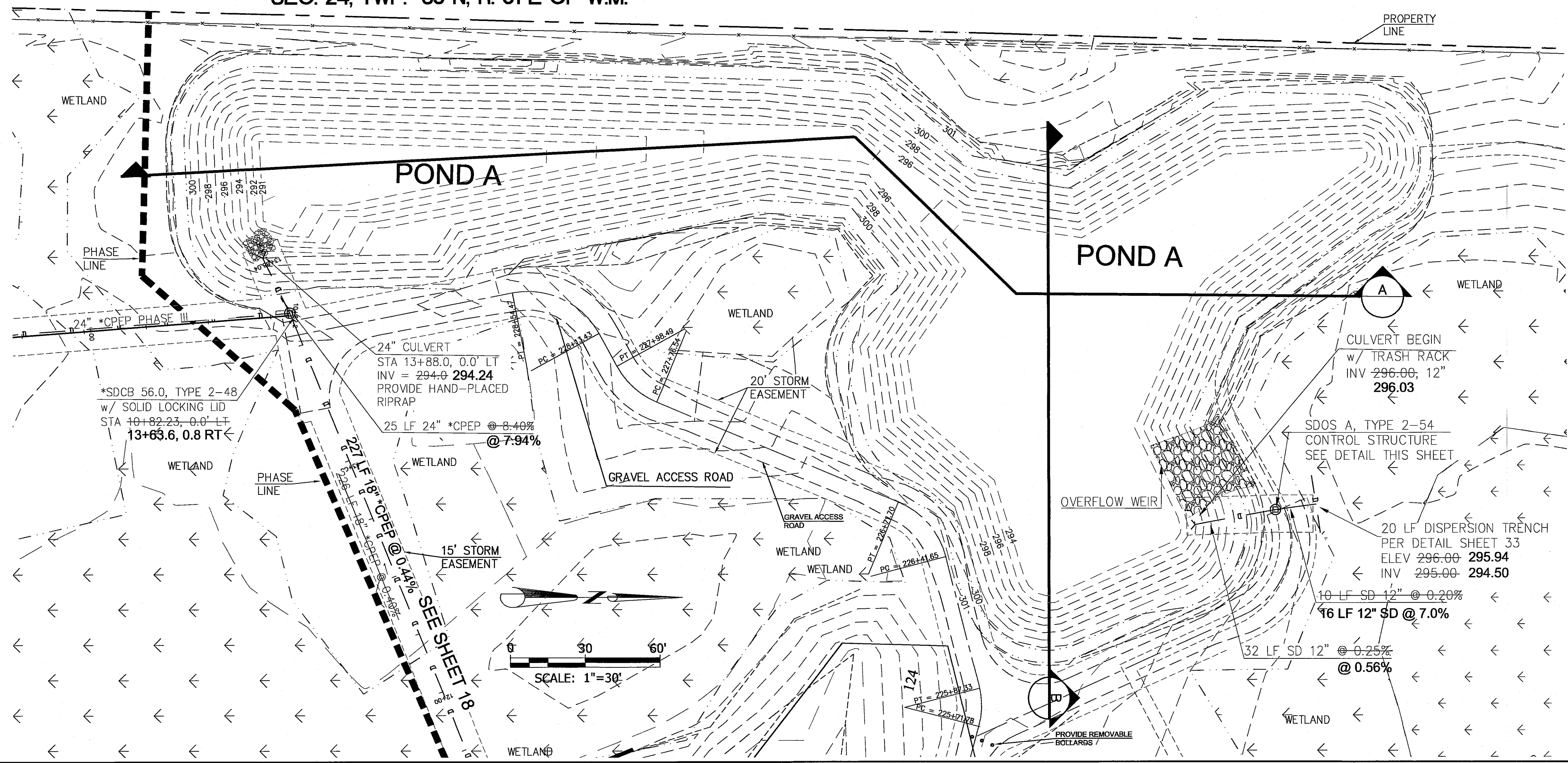
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1" = 20' Horiz
1" = 5' Vert



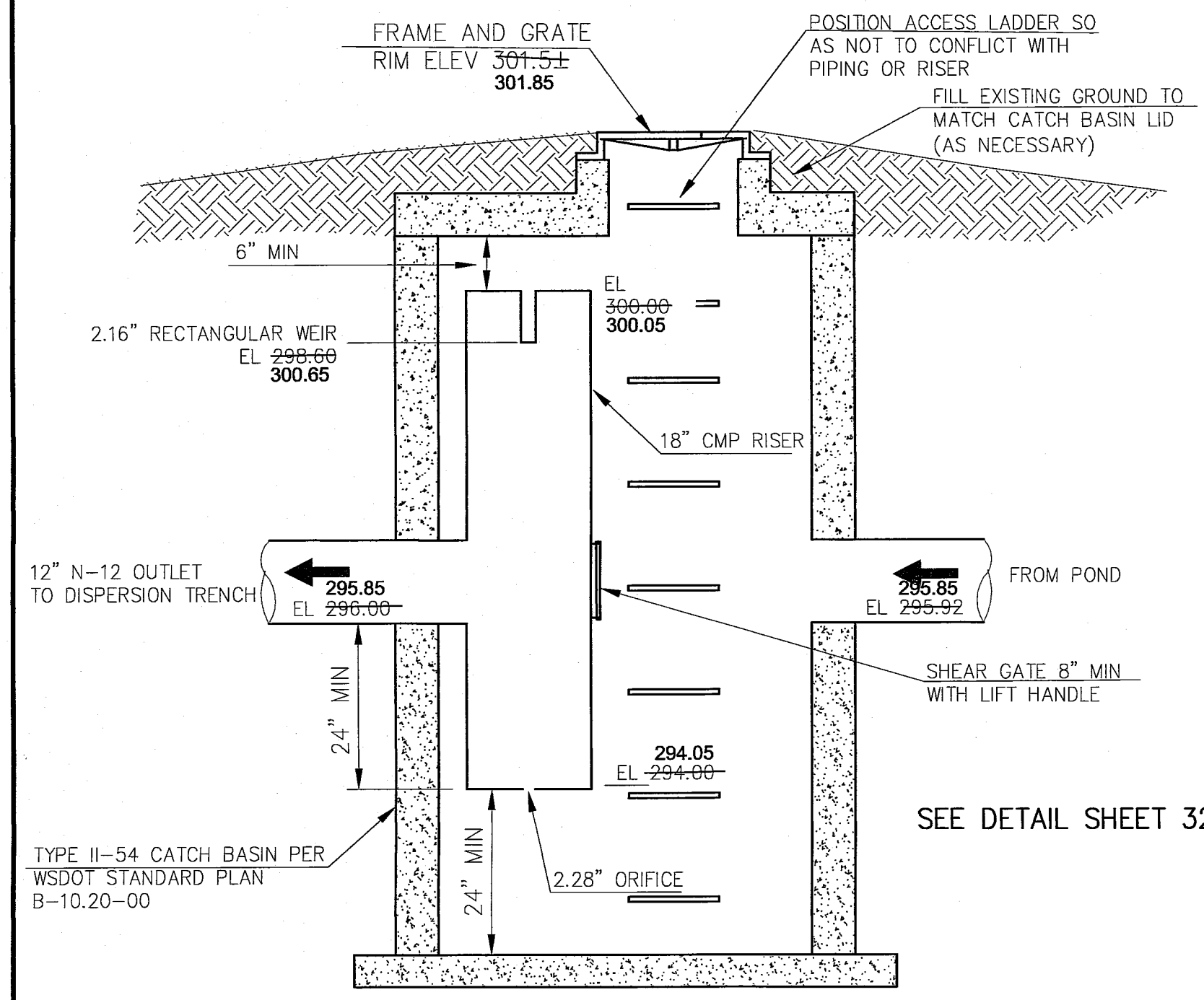
B POND A

SCALE:
1" = 20' Horiz
1" = 5' Vert

SEC. 24, TWP. 39 N, R. 01 E OF W.M.



SCALE: 1" = 30'



OUTLET CONTROL STRUCTURE - POND A
PER WSDOT STANDARD PLAN B-10.40-00

N.T.S.

AS-BUILTS

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA
DRAWING TITLE
POND A PLAN, X-SECTIONS & DETAILS

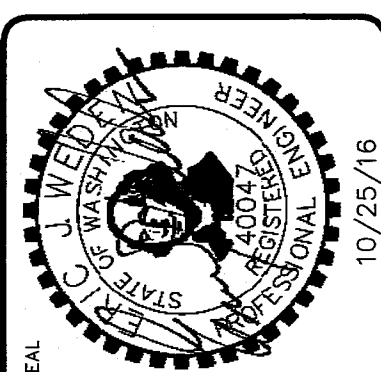
DATE : 01/16/2015
DRAWING No.

19 of 39

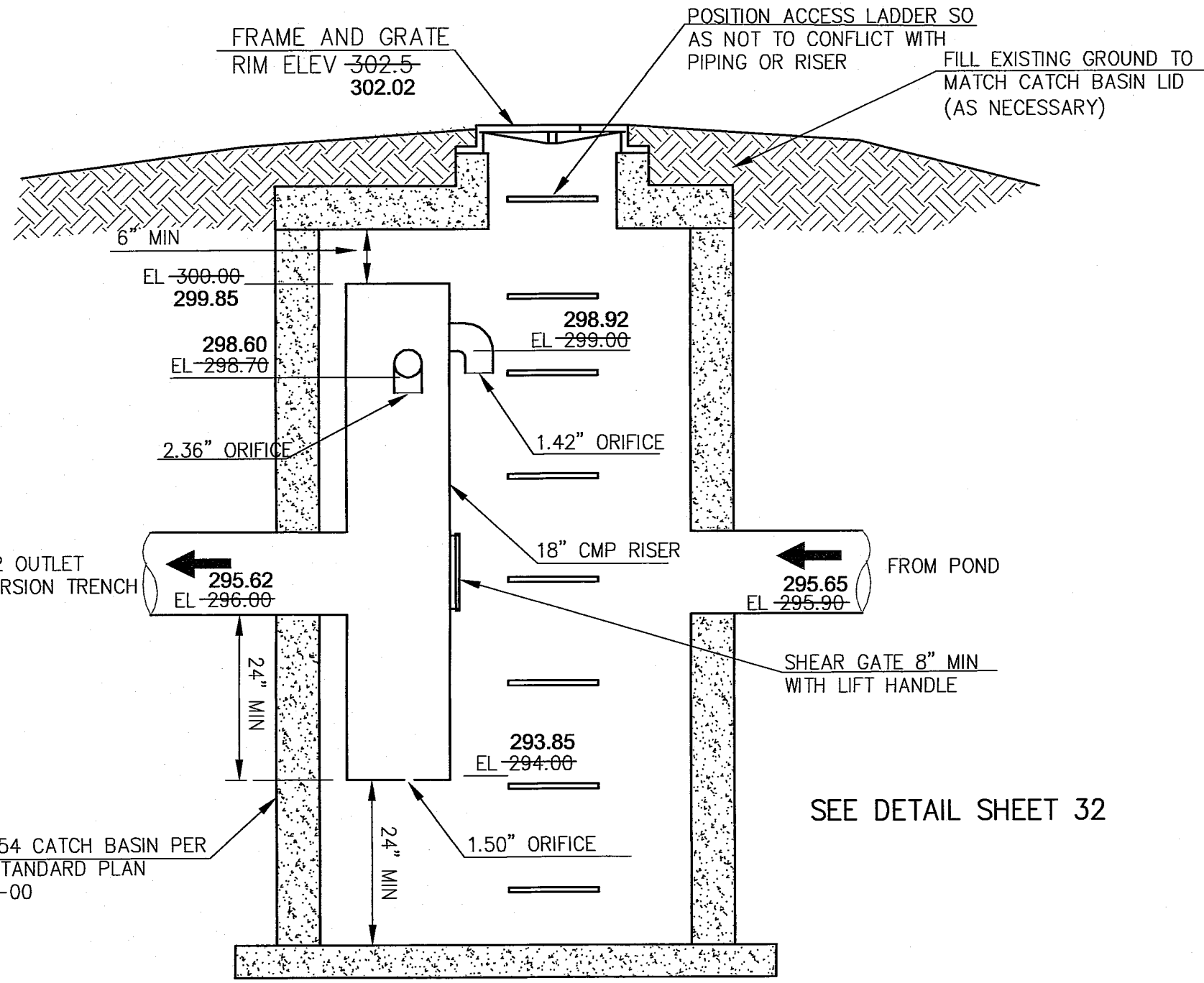
NO.	REVISIONS / SUBMISSIONS	DATE
4	REVISIONS PER CITY COMMENTS	05/29/15
3	REVISIONS PER CITY COMMENTS	04/14/15
2	REVISED LOT 72-80 & 86-107	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15
REVIEWED :	EJW	DRAWN : KLS
CAD FILE :		PROJECT NO. : 1308-02

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BY : CITY OF FERNDALE

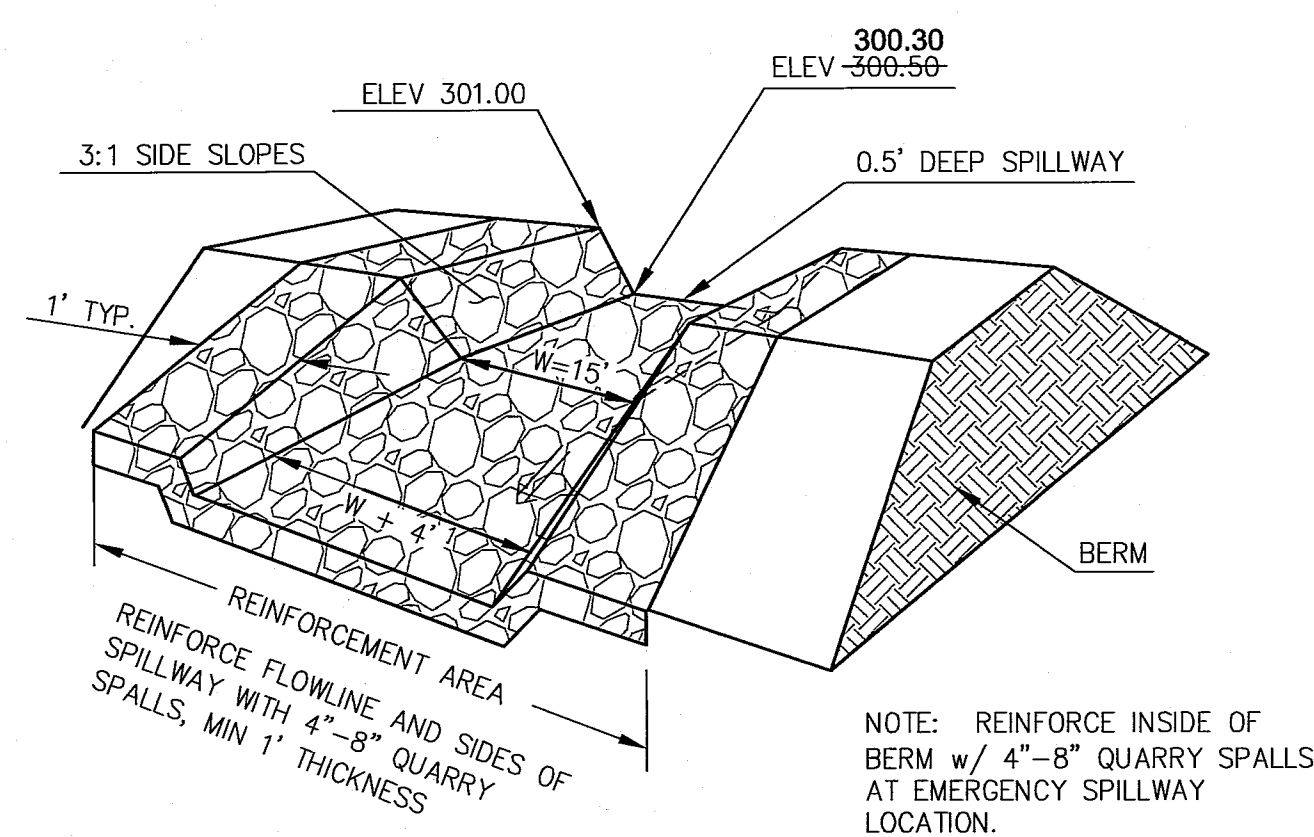
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#3 9/14/16 12/25/16
00008.019



OUTLET CONTROL STRUCTURE - POND B1
PER WSDOT STANDARD PLAN B-10.40-00 N.T.S.



EMERGENCY OVERFLOW WEIR
REFERENCE 2005 DOE MANUAL
VOL III, SECTION 3.2 N.T.S.

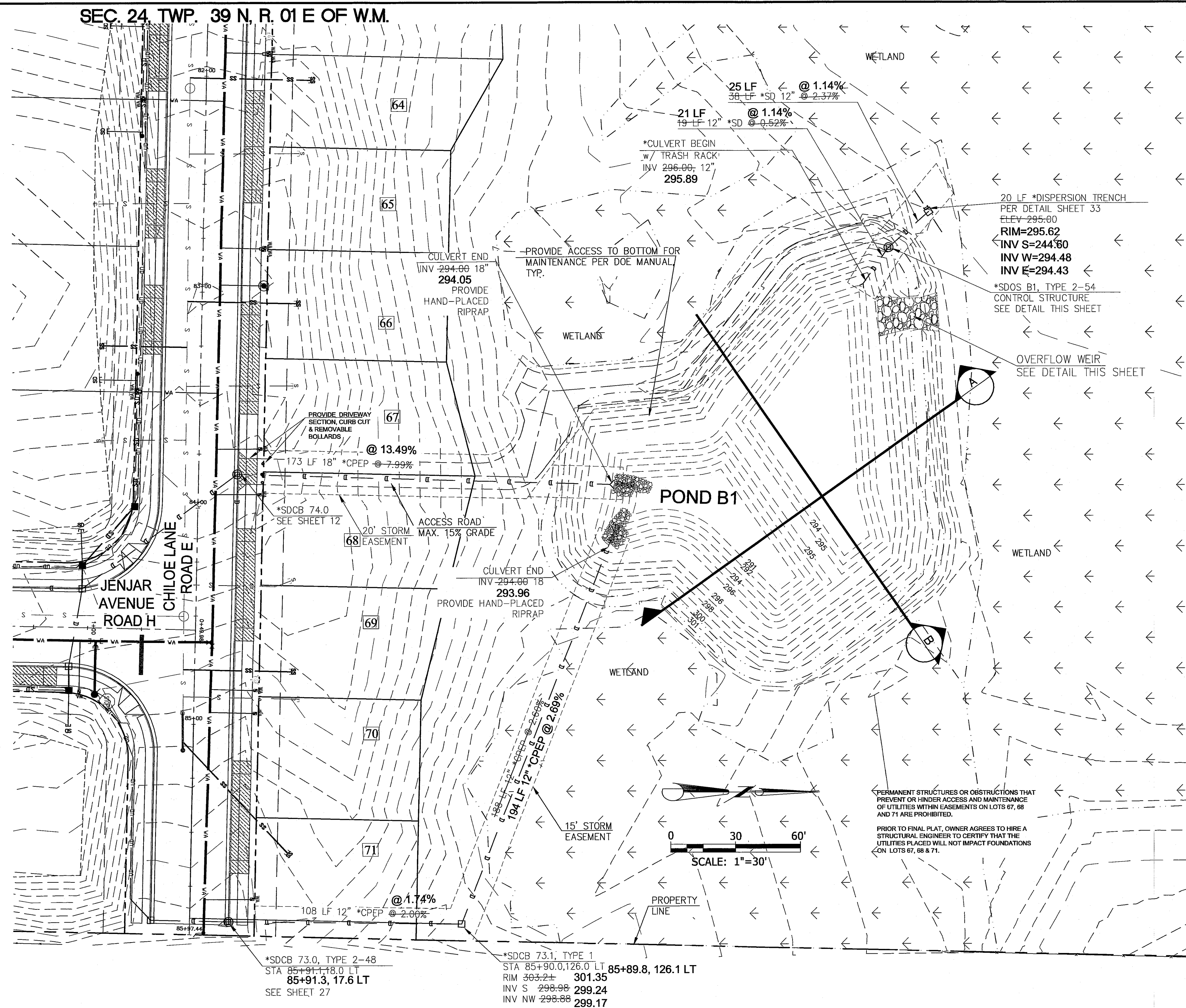
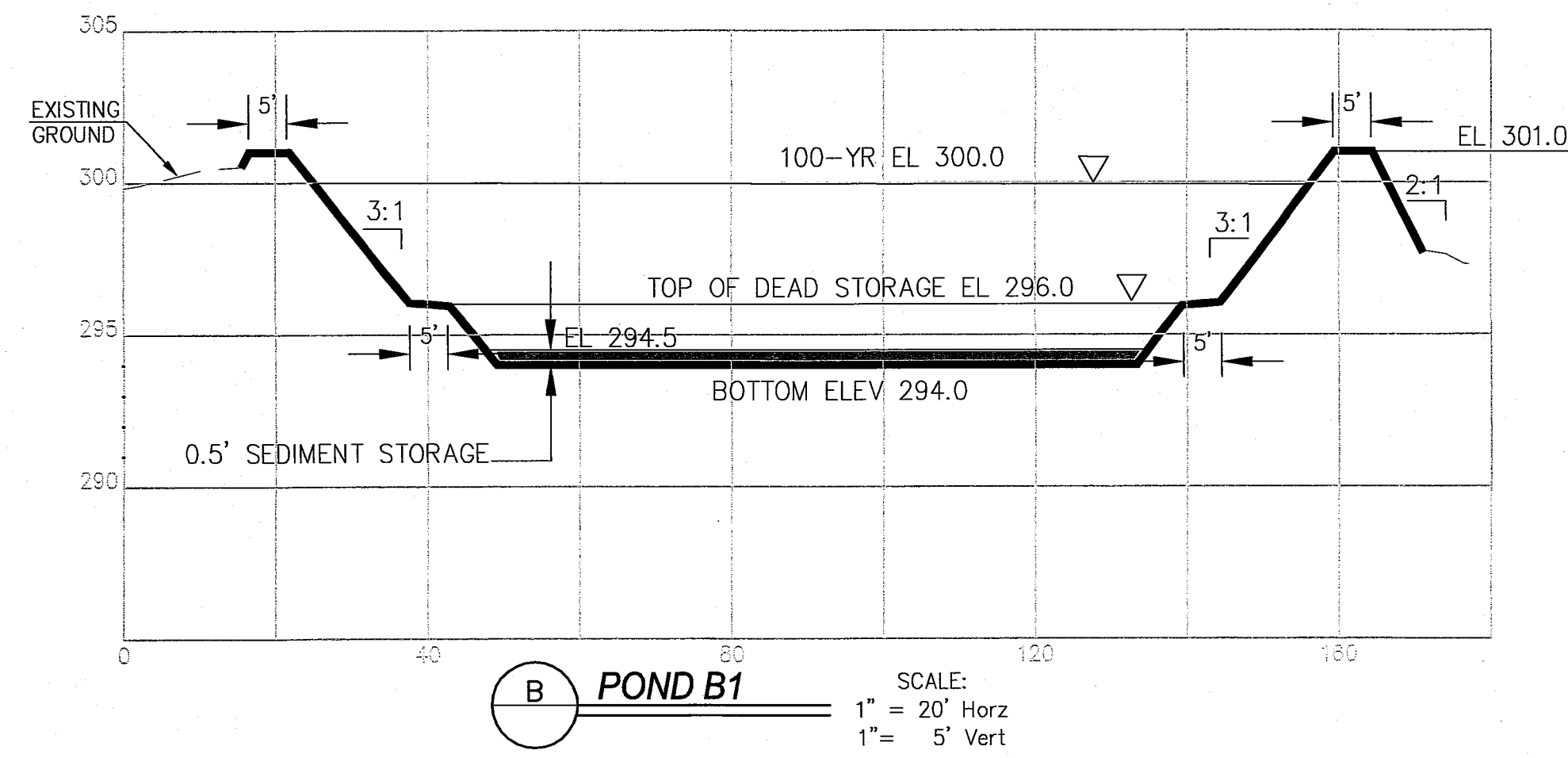
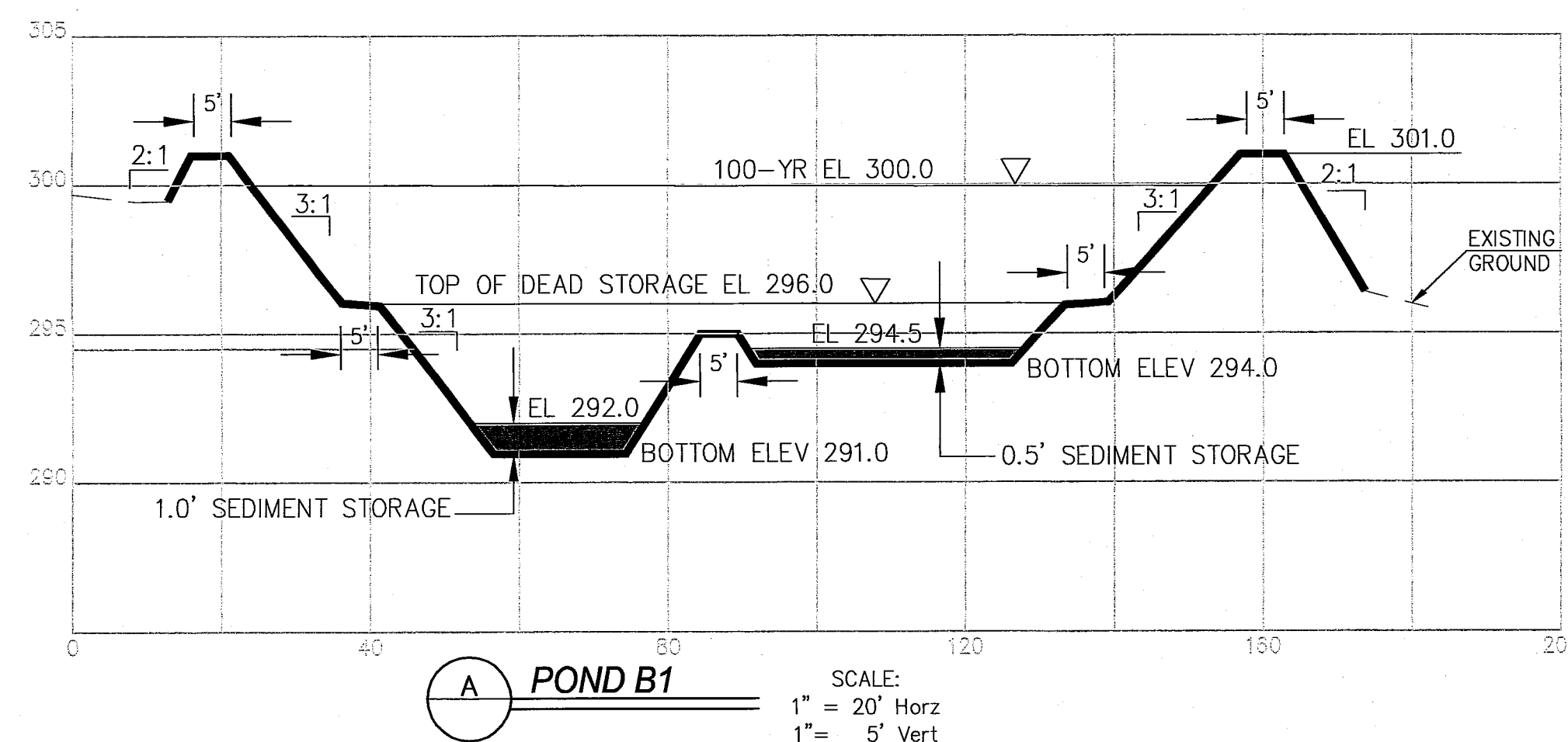
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CONTRACTOR TO INSTALL OUTLET STRUCTURE FLOW
MANIFOLD, COMPLETE ALL STORM INFRASTRUCTURE AND
ACCESS ROADS

ANY PORTION OF POND ACCESS ROADS TO BE COMPLETED
WILL BE BUILT TO A 15' WIDTH.

SEE SHEET 34 FOR POND EMBANKMENT CONSTRUCTION
NOTES AND ACCESS ROAD SECTIONS

PROVIDE DRIVEWAY SECTION, CURB CUT & REMOVABLE
BOLLARDS ON RIGHT-OF-WAY AT ENTRANCE OF ACCESS
ROAD



AS-BUILT REVISED PER CITY REVIEW 10/13/16

NO.	REVISIONS / SUBMISSIONS	DATE
1	AS-BUILT INFORMATION	03/21/16
2	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15

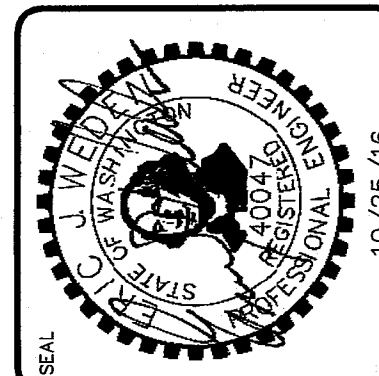
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DRAWN BY: KLS
PROJECT NO.: 1308-02
CAD FILE:

AS-BUILTS

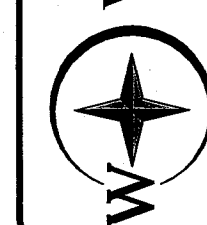
**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA**
DRAWING TITLE
POND B1 PLAN, X-SECTIONS & DETAILS

DATE: 01/16/2015
DRAWING NO.

20 of 39



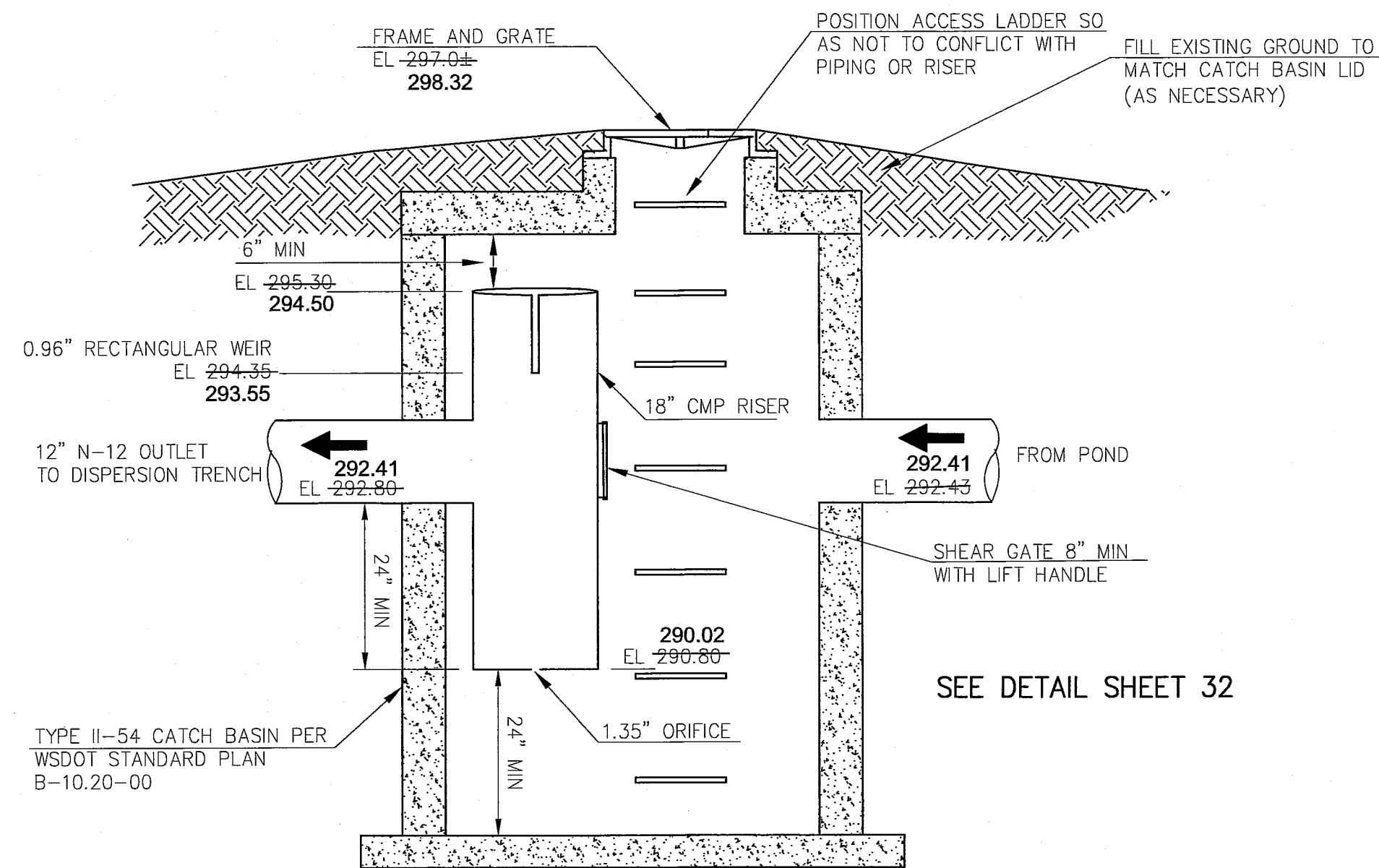
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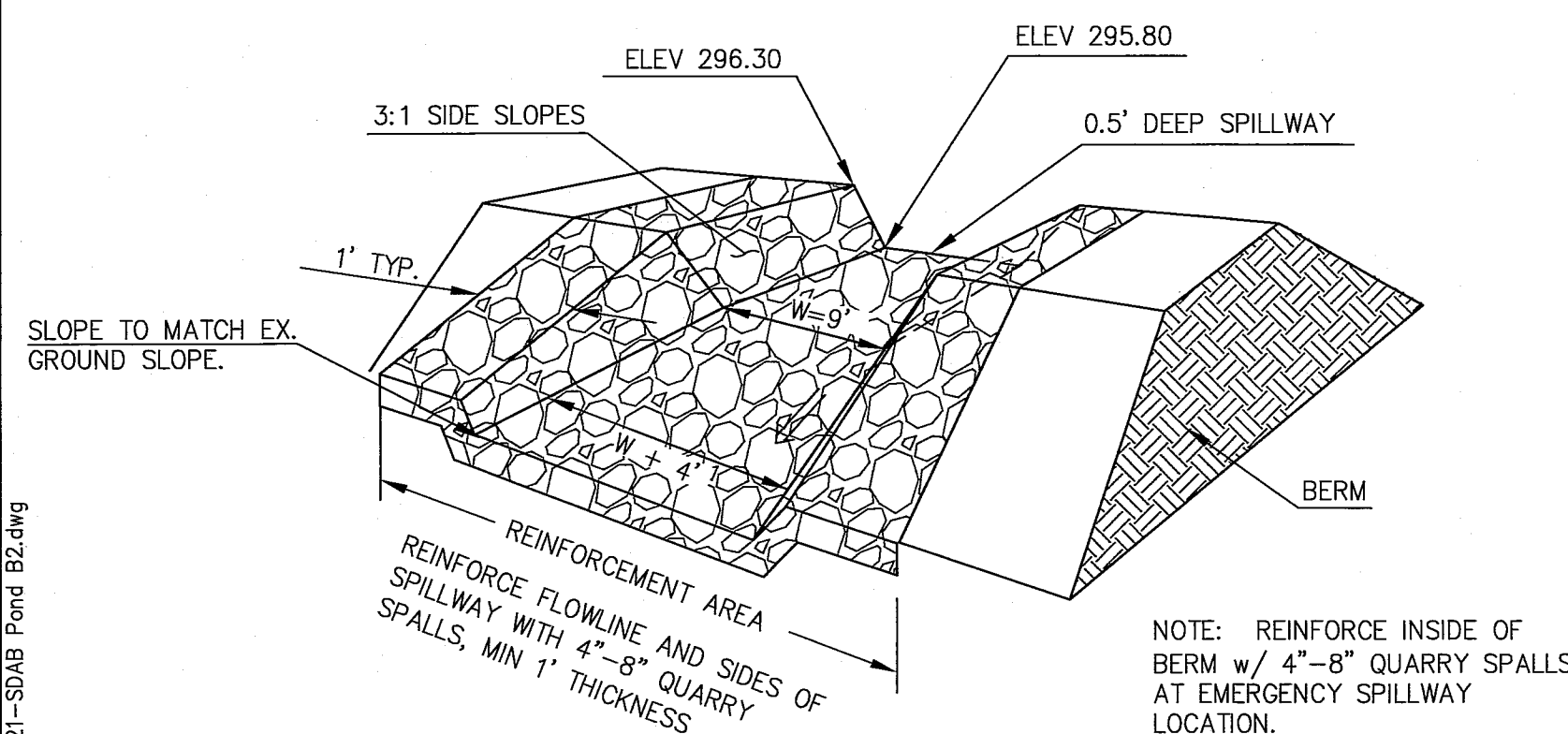
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DEC 12 2016
BY: CITY OF FERNDALE

AS 9/27/16 12/2/16 020000

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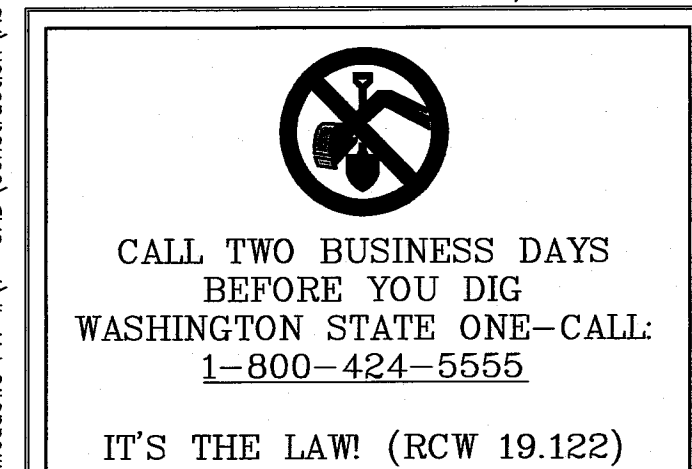


OUTLET CONTROL STRUCTURE - POND B2
PER WSDOT STANDARD PLAN B-10.40-00



EMERGENCY OVERFLOW WEIR

REFERENCE 2005 DOE MANUAL
VOL III, SECTION 3.2

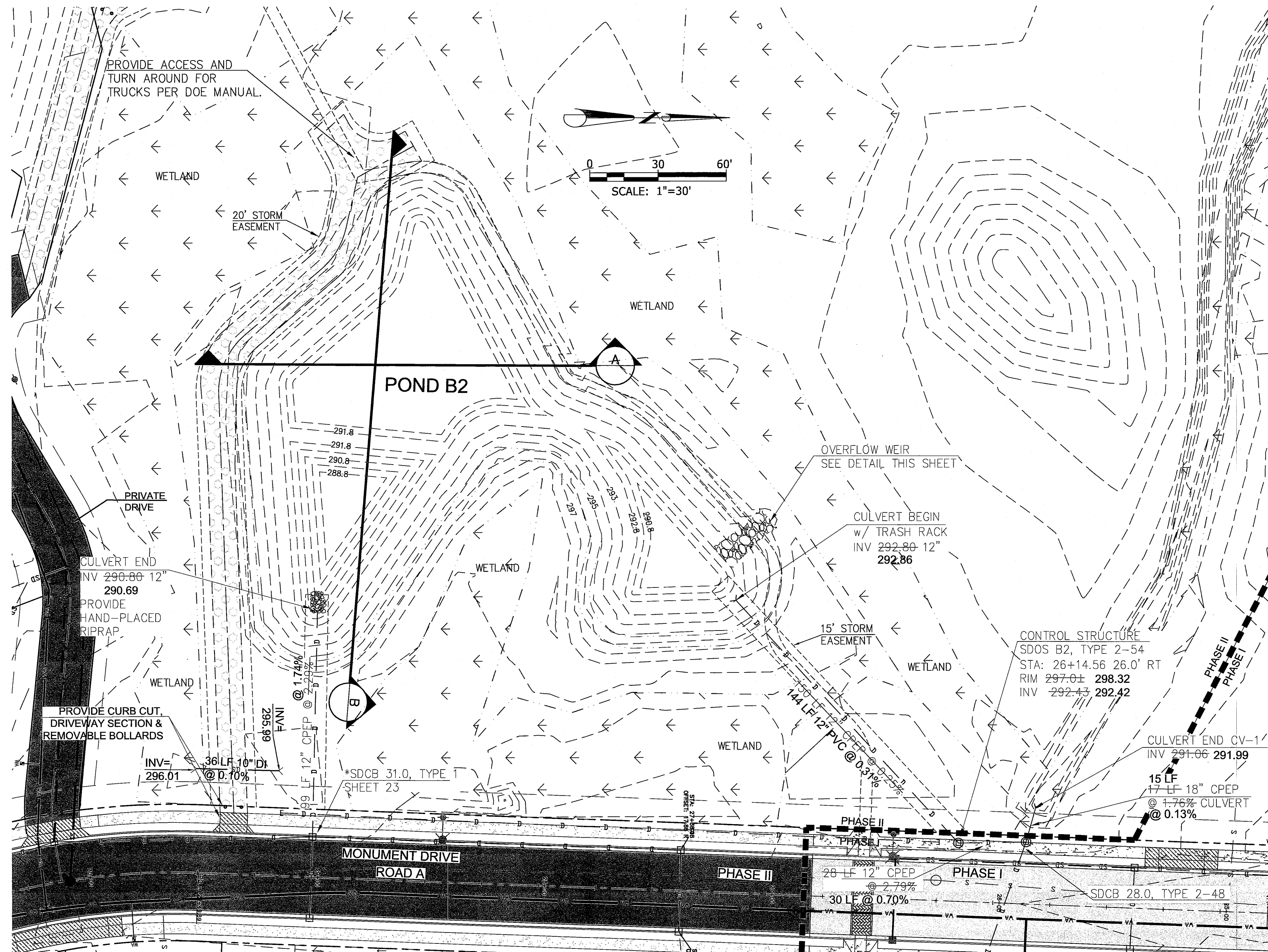
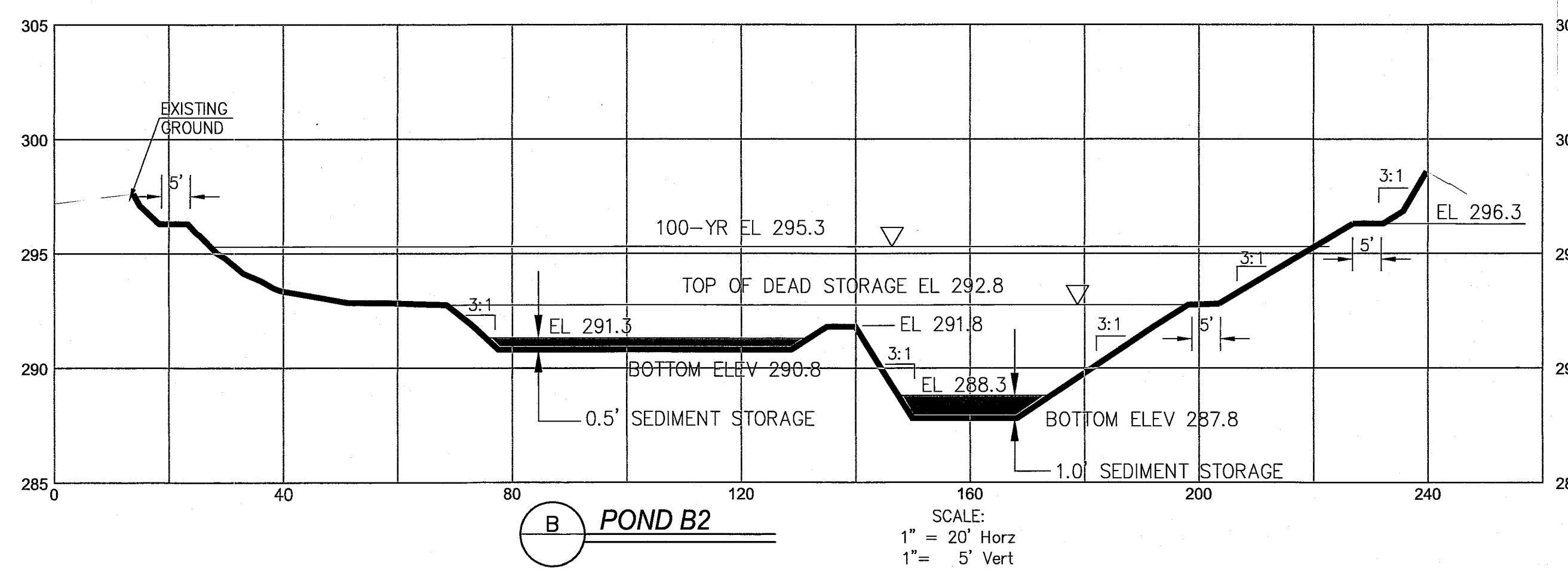
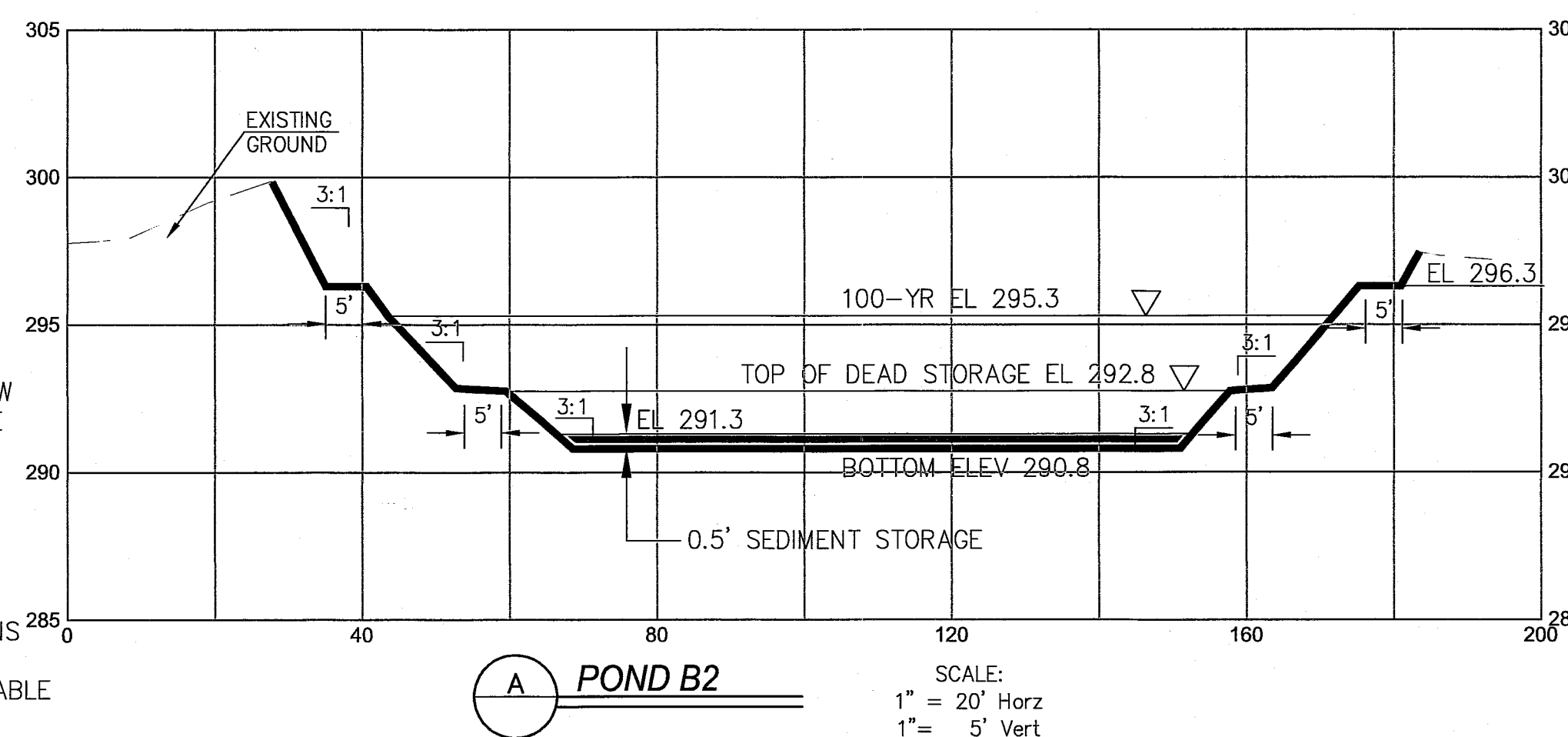


CONTRACTOR TO INSTALL OUTLET STRUCTURE FLOW MANIFOLD, COMPLETE ALL STORM INFRASTRUCTURE AND ACCESS ROADS

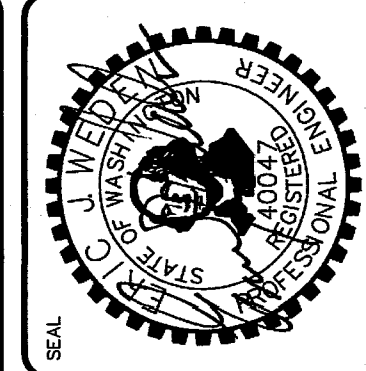
ANY PORTION OF POND ACCESS ROADS TO BE COMPLETED WILL BE BUILT TO A 15' WIDTH.

SEE SHEET 34 FOR POND EMBANKMENT CONSTRUCTION NOTES AND ACCESS ROAD SECTIONS

PROVIDE DRIVEWAY SECTION, CURB CUT & REMOVABLE BOLLARDS ON RIGHT-OF-WAY AT ENTRANCE OF ACCESS ROAD



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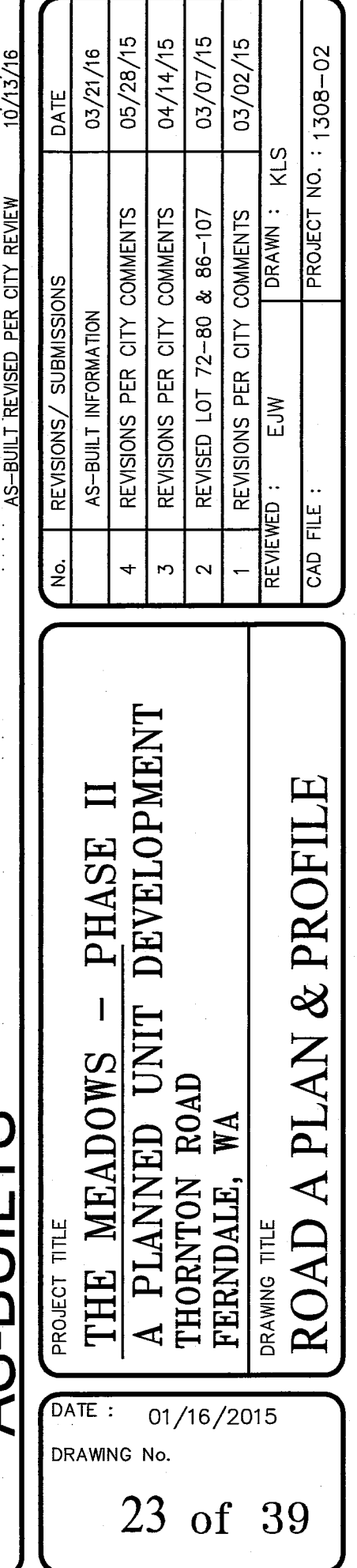
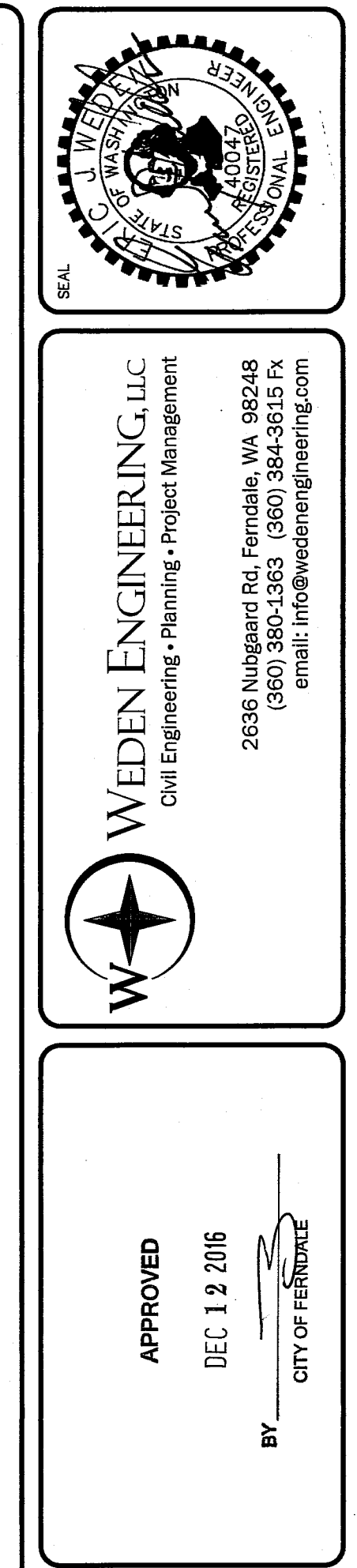
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NO.	REVISIONS / SUBMISSIONS	DATE
1	AS-BUILT INFORMATION	03/27/16
2	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15
6	REVISIONS PER CITY COMMENTS	03/02/15
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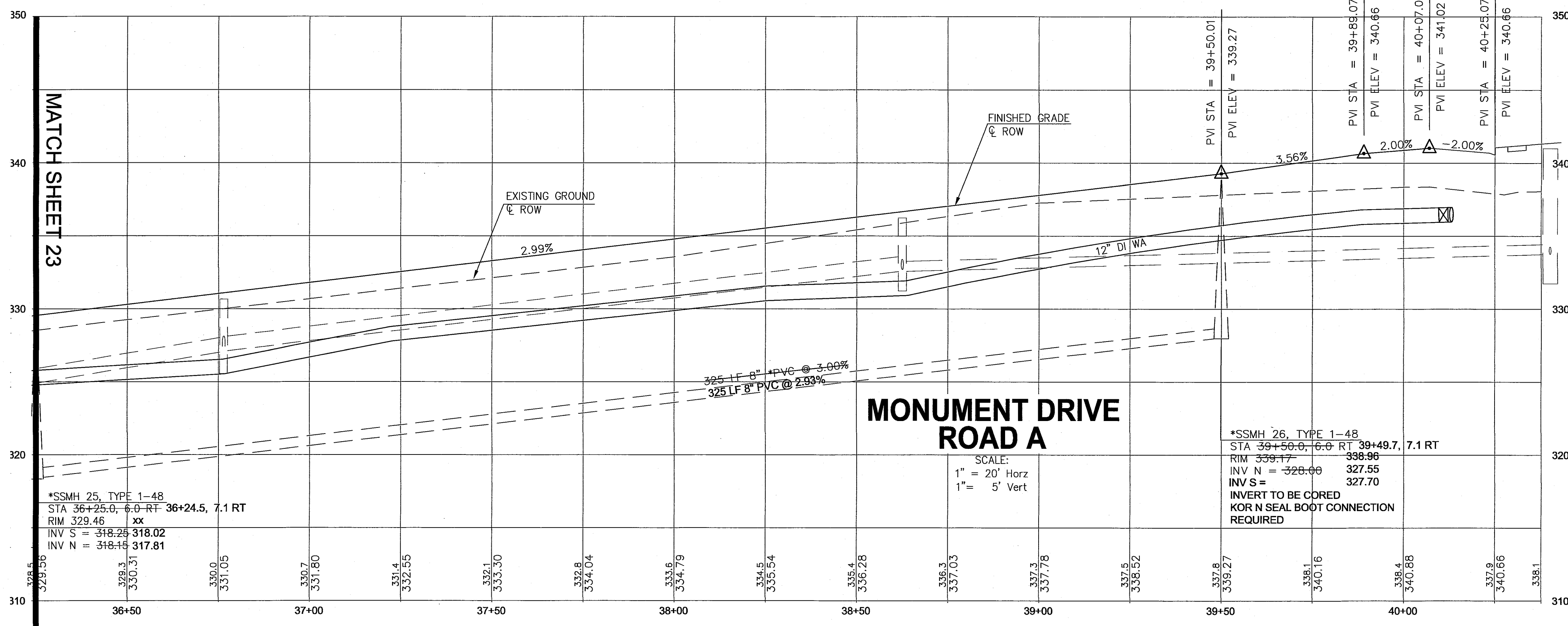
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA

DATE: 01/16/2015
DRAWING No.

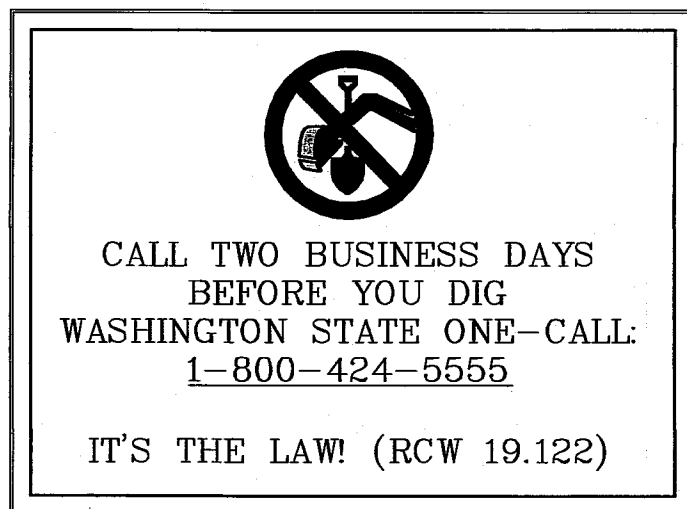
21 of 39



kenny 10/25/16 10:14am - P:\1308-02 The Meadows PH-II V CAD\Construction\As-Built\1308 PH2-24-SSAB.dwg



- NOTE:
- EXISTING SANITARY SEWER SERVICES TO BE REMOVED WILL BE CAPPED AT THE MAIN LINE TEE AND THE EXISTING PIPE WILL BE REMOVED
 - WATER METER SETTERS WILL BE INSTALLED PER COF STANDARD DETAIL W-5.
 - THE MAINLINE WATER SYSTEM REQUIRES A MINIMUM OF 36 INCHES OF COVER.
 - WATERLINE FITTINGS ARE SHOWN WITH GENERIC SYMBOLS, CONTRACTOR TO SEE FITTING LABELS FOR TYPE, SIZE, AND CONNECTION TYPE.
 - CONTRACTOR TO DEFLECT DI PIPE PER MANUFACTURES SPECIFICATIONS, MAXIMUM DEFLECTION ANGLE 5° OR AT A MINIMUM 230° RADIUS.



AS-BUILTS

No.	REVISIONS / SUBMISSIONS	DATE
1	AS-BUILT INFORMATION	03/21/16
2	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15

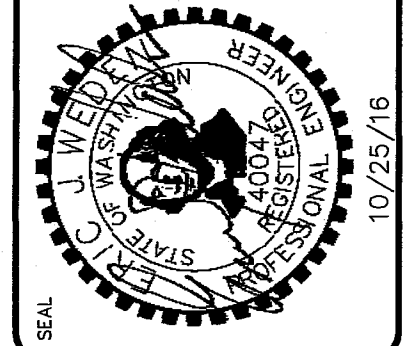
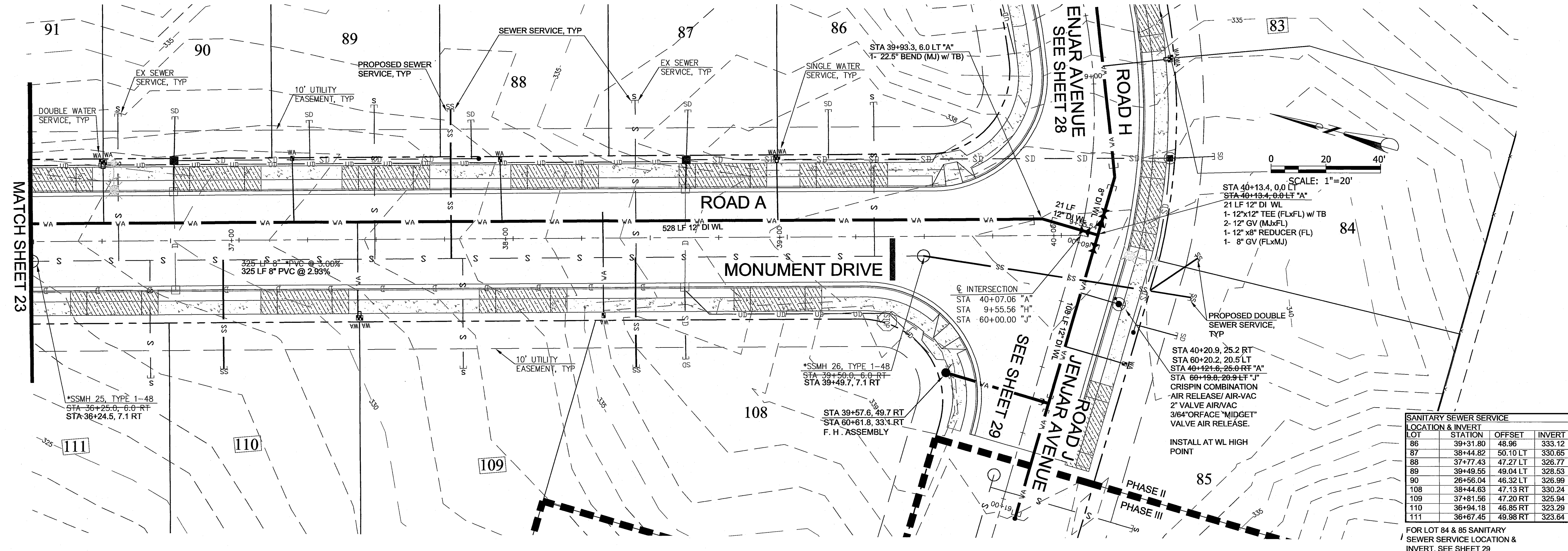
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CAD FILE: PROJECT NO.: 1308-02

PROJECT TITLE
**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA**

DRAWING TITLE
ROAD A PLAN & PROFILE

DATE: 01/16/2015
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24 of 39

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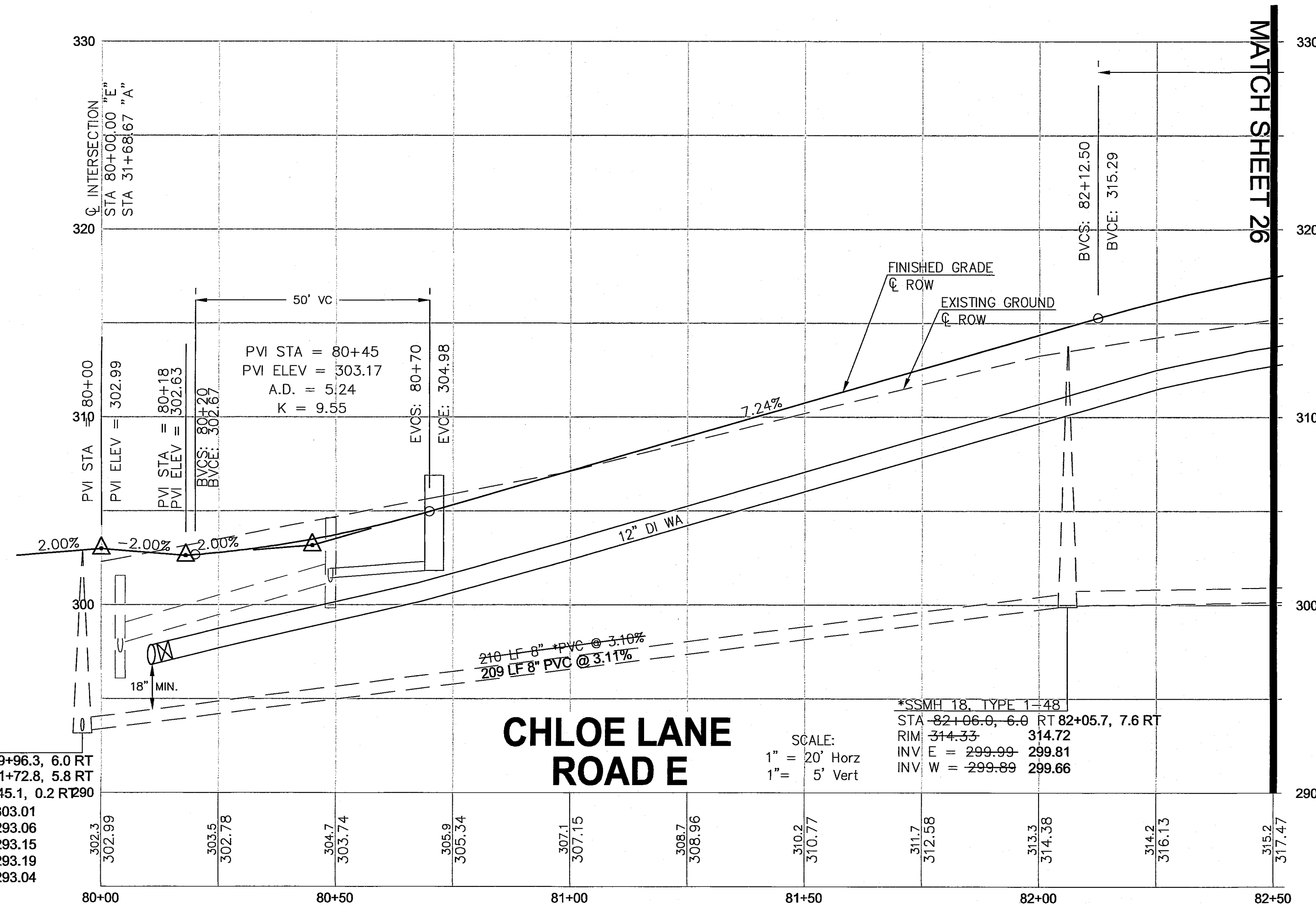
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*SSMH 17, TYPE 1-48
STA 79+96.0, 6.0 RT "E" 79+96.3, 6.0 RT
STA 31+72.7, 6.0 RT "A" 31+72.8, 5.8 RT
STA 4+44.9, 0.0 RT "SS-1" 4+45.1, 0.2 RT
RIM = 302.97 303.01
INV SW = 293.37 293.06
INV E = 293.37 293.15
INV SE = 293.37 293.19
INV NW = 293.27 293.04



- NOTE:
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 - CONTRACTOR TO DEFLECT DI PIPE PER MANUFACTURERS SPECIFICATIONS, MAXIMUM DEFLECTION ANGLE 5° OR AT A MINIMUM 230' RADIUS.

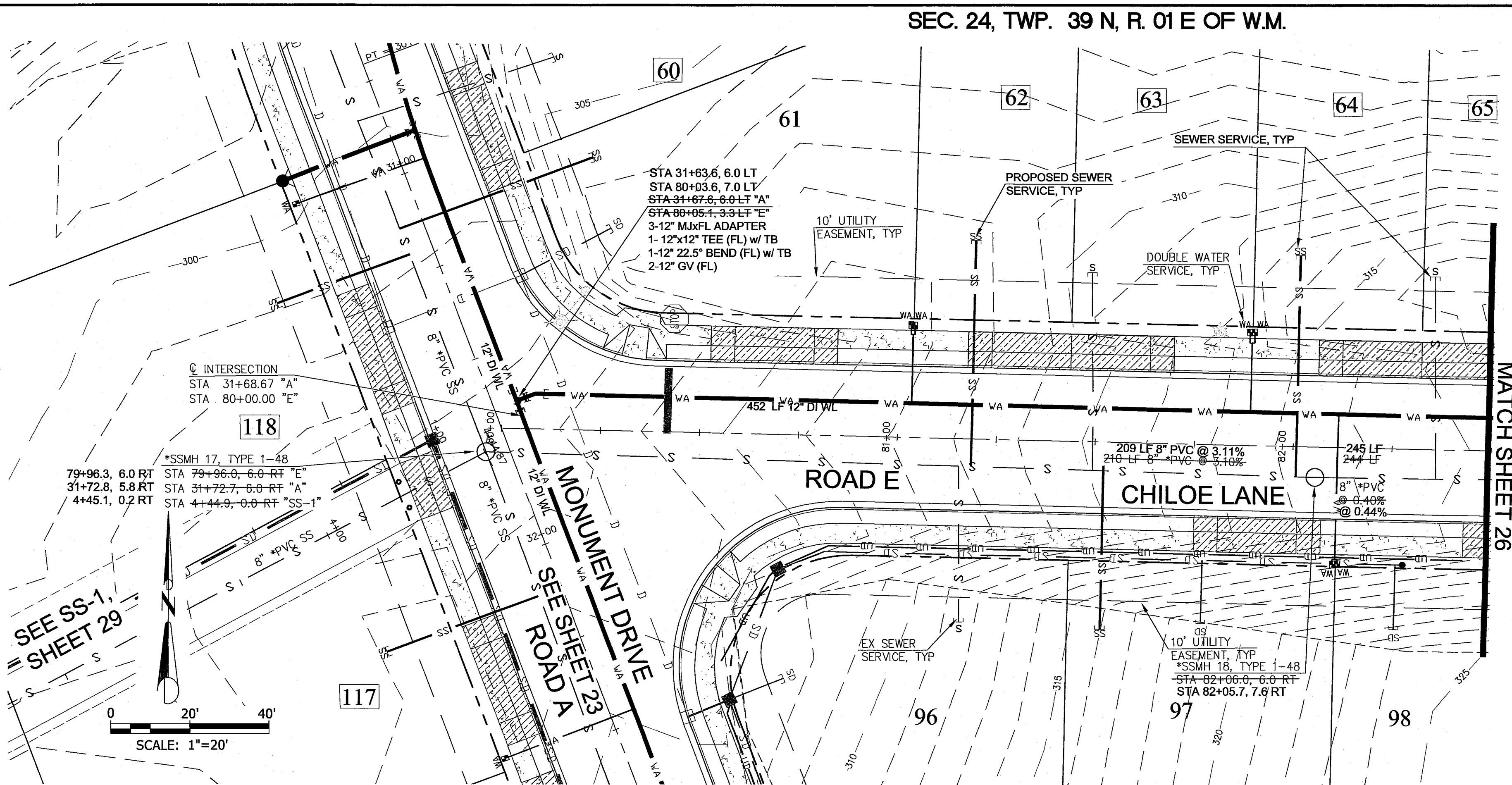
AS-BUILTS

PROJECT TITLE
**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA**

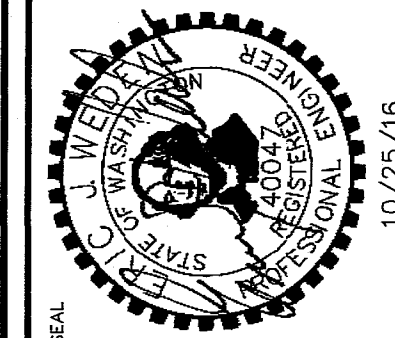
DRAWING TITLE
ROAD E PLAN & PROFILE

DATE : 01/16/2015
DRAWING No.

25 of 39



SANITARY SEWER SERVICE			
LOT	STATION	OFFSET	INVERT
62	81+18.78	50.04 LT	298.40
63	81+48.32	42.65 LT	303.19
64	82+00.84	48.23 LT	300.28
65	82+34.91	43.57 LT	301.31
96	81+16.55	46.21 RT	302.80
97	81+52.25	47.25 RT	305.67



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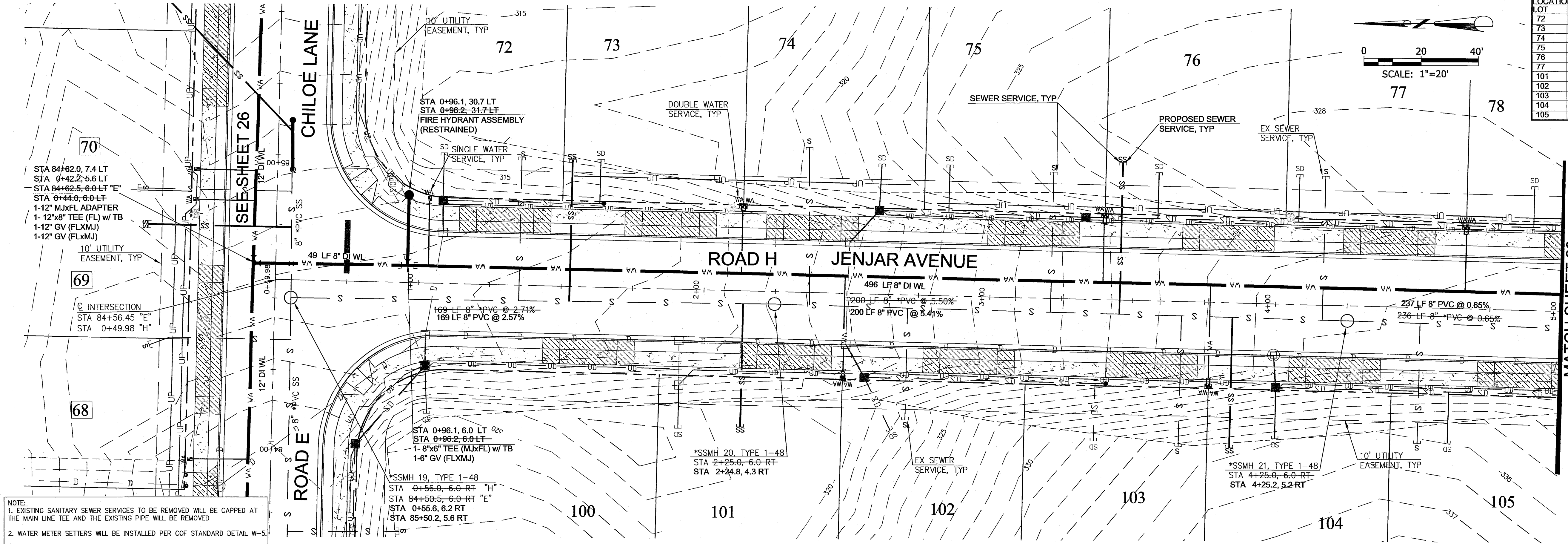
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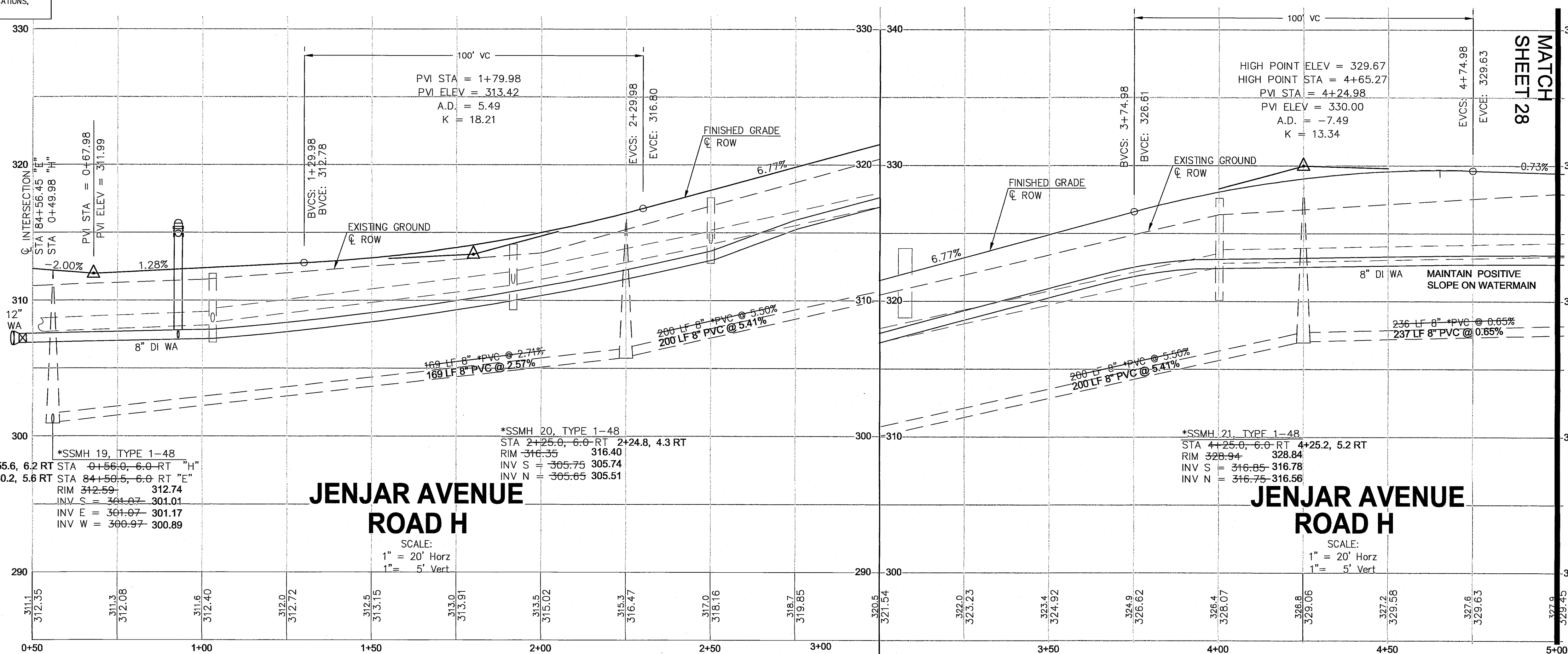
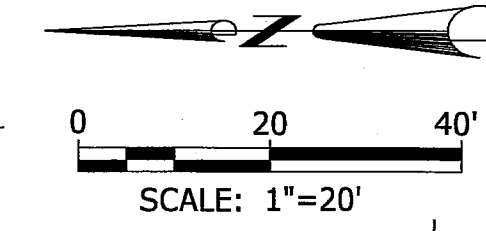
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SEC. 24, TWP. 39 N, R. 01 E OF W.M.



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SANITARY SEWER SERVICE			
LOCATION & INVERT	STATION	OFFSET	INVERT
72	1+35.09	45.03 LT	306.43
73	1+53.00	44.34 LT	307.68
74	2+35.66	50.58 LT	311.76
75	3+21.32	44.10 LT	317.74
76	3+45.41	48.05 LT	317.99
77	4+16.44	45.00 LT	320.18
101	2+13.79	47.50 RT	312.82
102	2+71.34	43.61 RT	314.11
103	3+67.14	50.49 RT	325.54
104	3+84.97	50.57 RT	324.10
105	4+50.65	47.43 RT	328.43



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AS-BUILTS

THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
THORNTON, WA
DRAWING TITLE
ROAD H PLAN & PROFILE

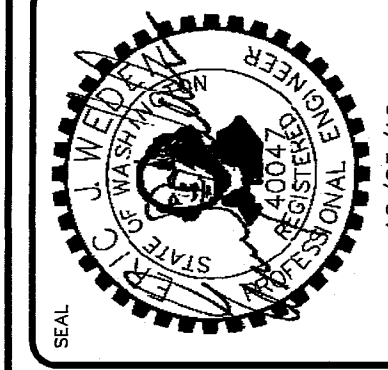
DATE : 01/16/2015
DRAWING No.

27 of 39

AS-BUILT REVIEW PER CITY REVIEW		DATE	10/13/16
NO.	REVISIONS / SUBMISSIONS	DATE	
4	AS-BUILT INFORMATION	03/21/16	
3	REVISIONS PER CITY COMMENTS	05/28/15	
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1	REVISIONS PER CITY COMMENTS	03/07/15	
1	REVISIONS PER CITY COMMENTS	03/02/15	
REVIEWED : EJM		DRAWN : KLS	
CAD FILE :		PROJECT NO. 1308-02	

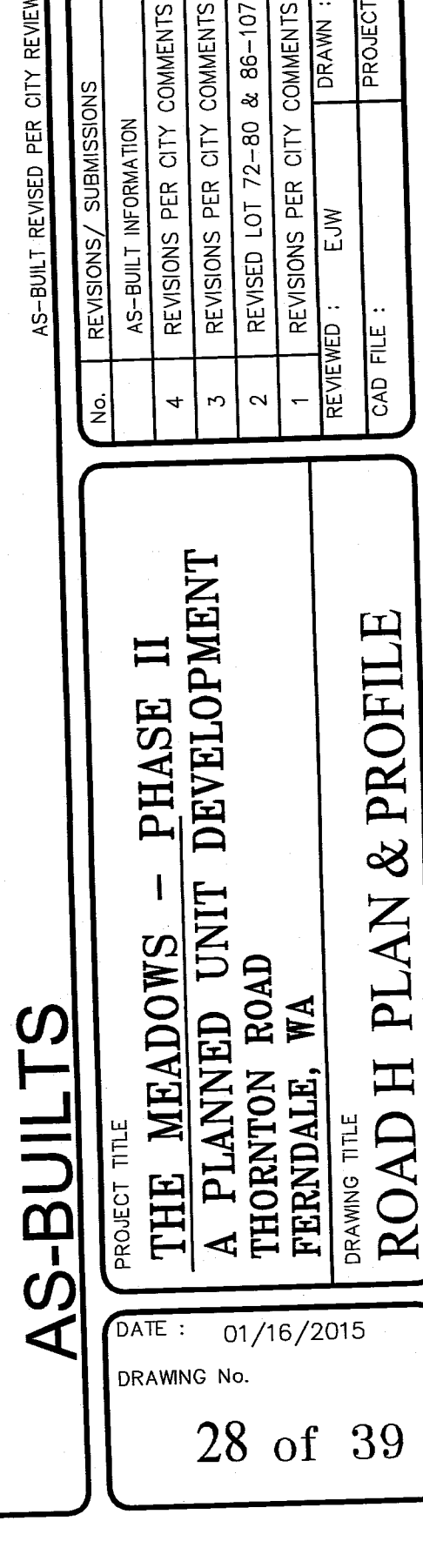
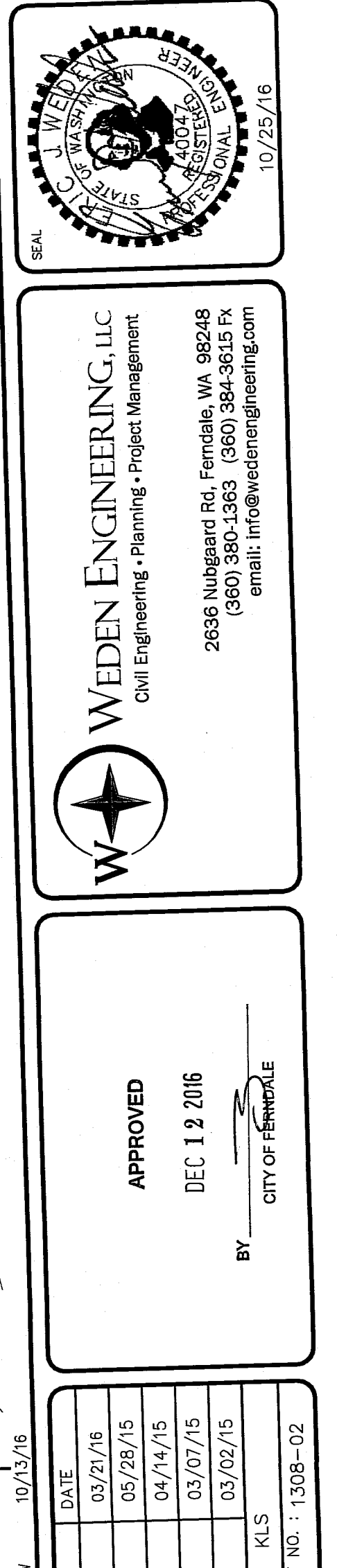
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email: info@wedenengineering.com



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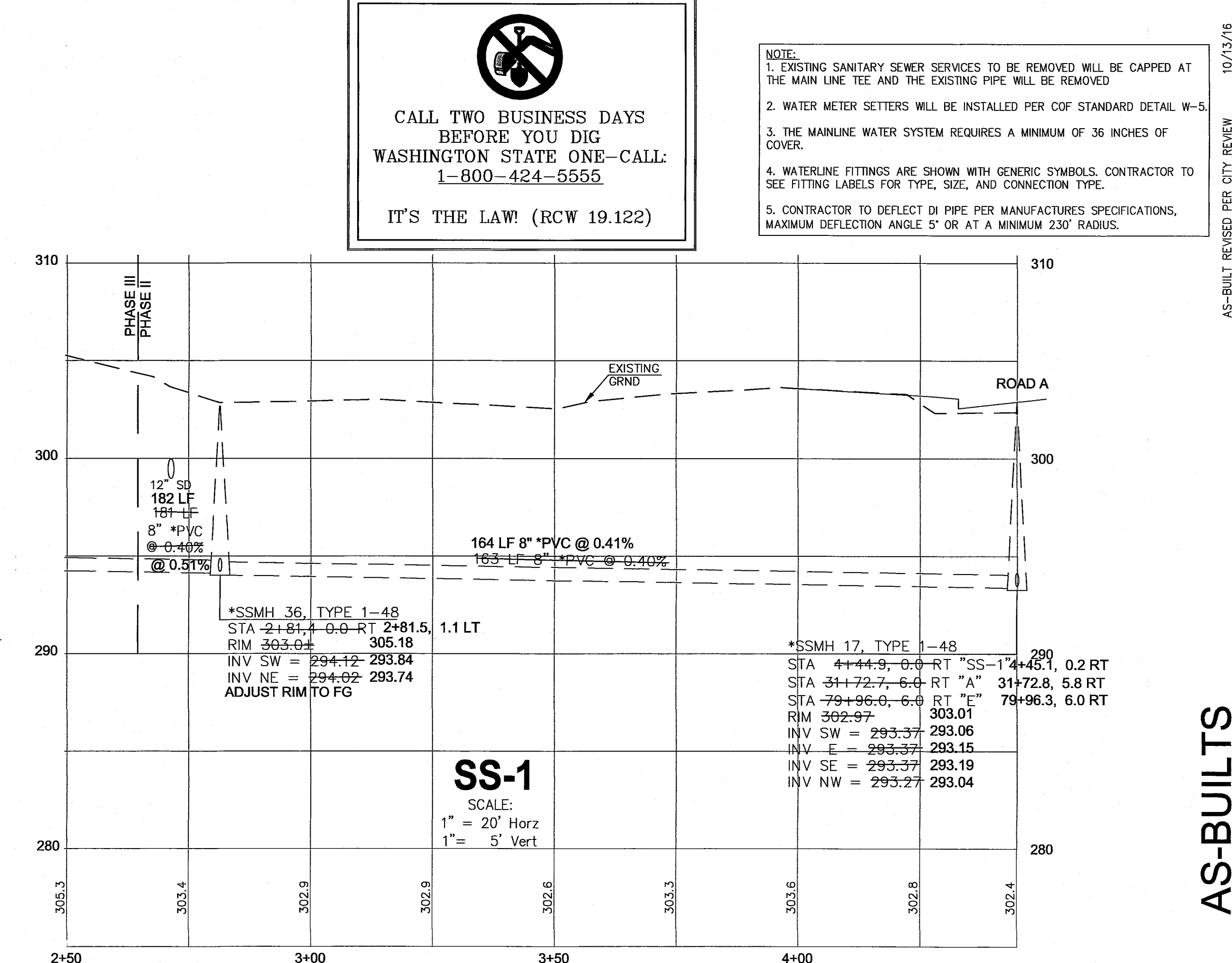
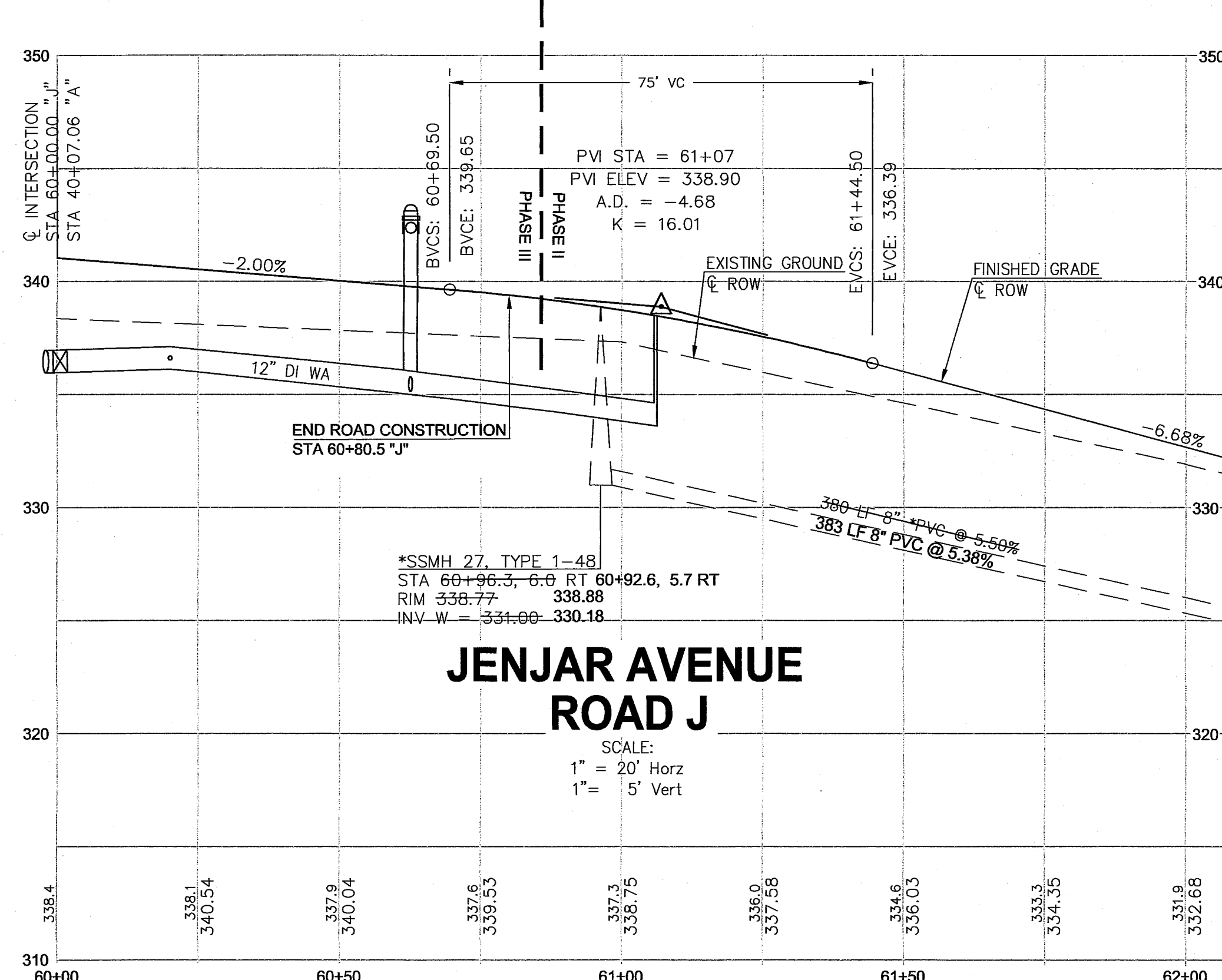
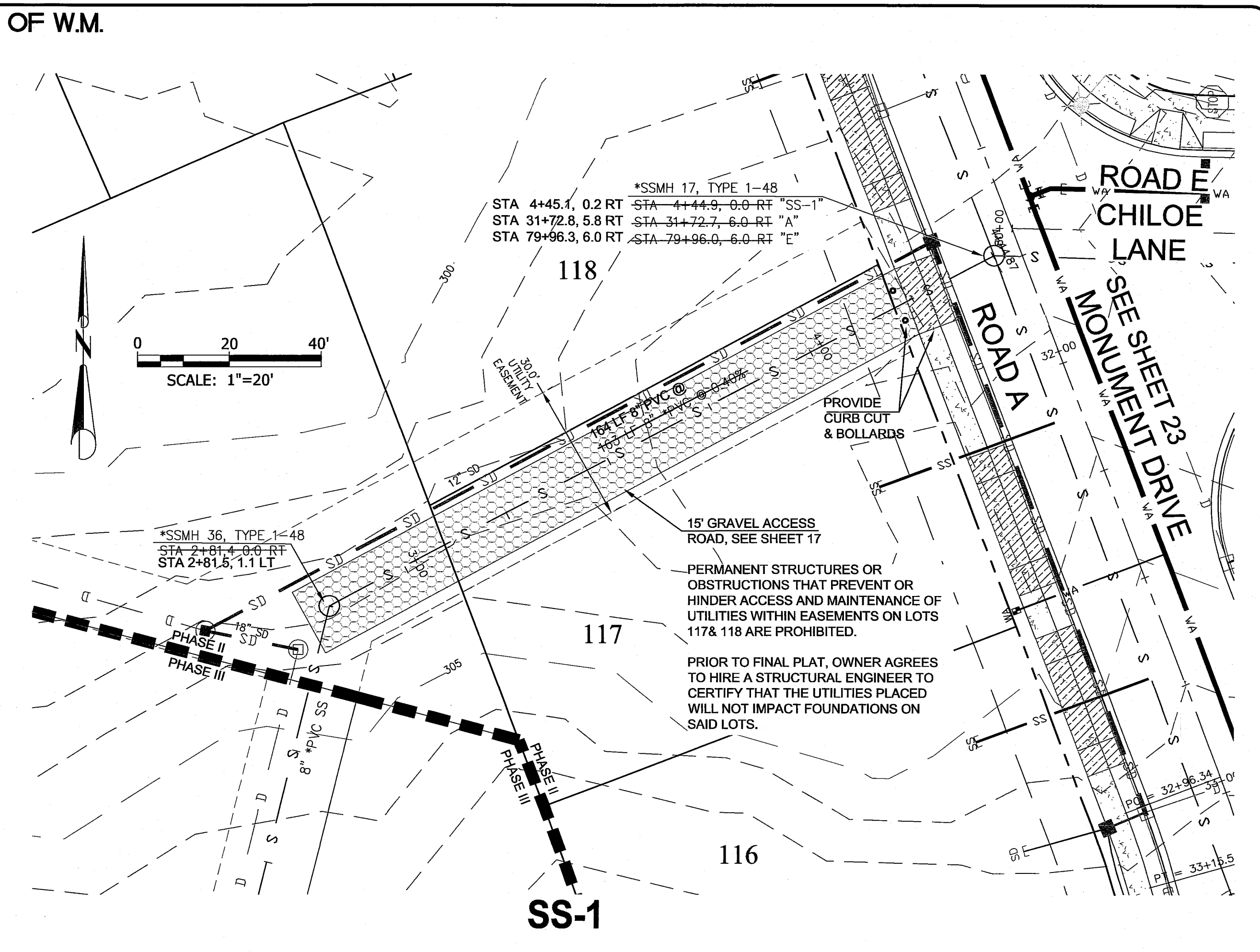
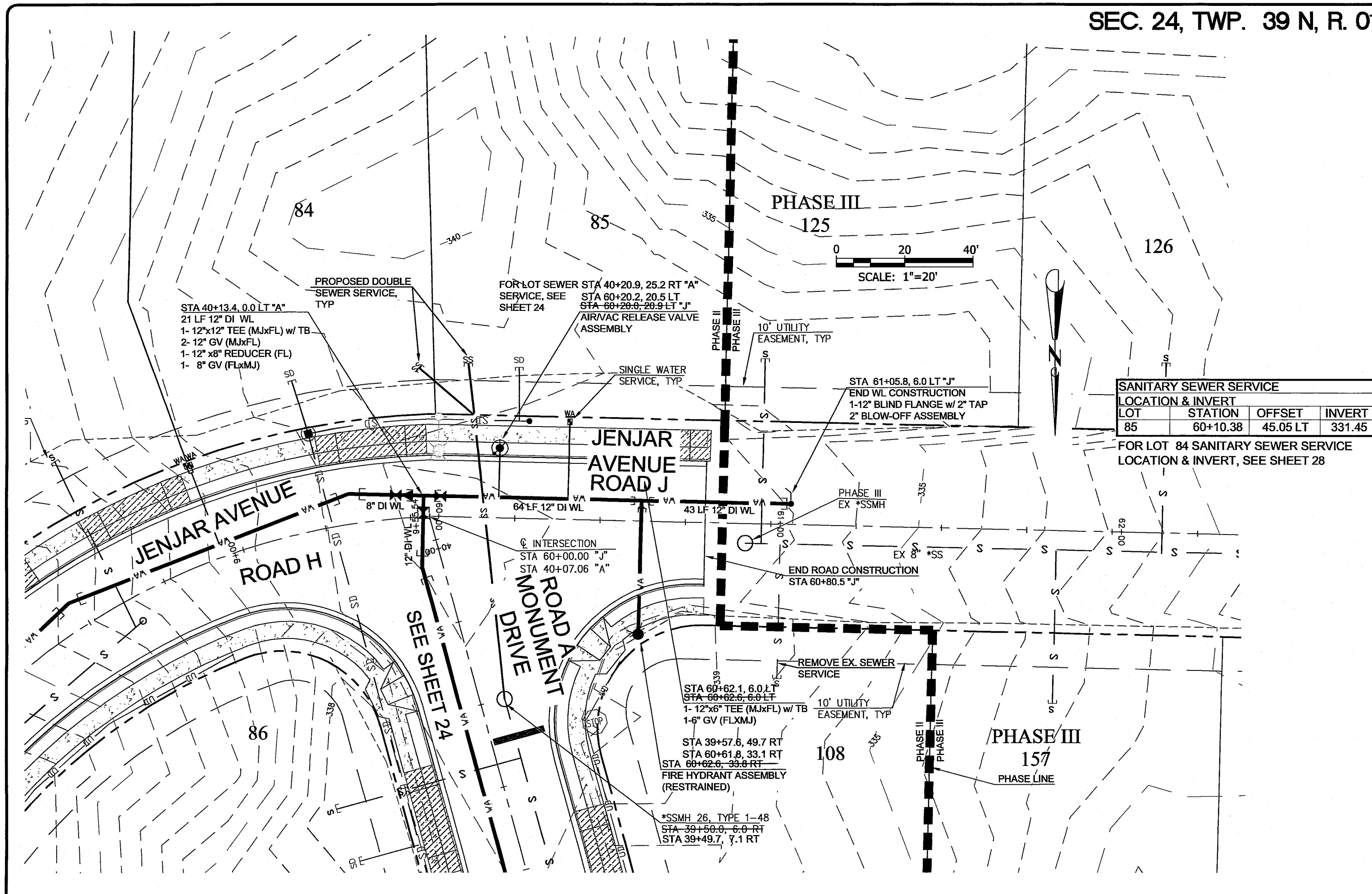
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CALL TWO BUSINESS DAYS
BEFORE YOU DIG
WASHINGTON STATE ONE-CALL:
1-800-424-5555

IT'S THE LAW! (RCW 19.122)

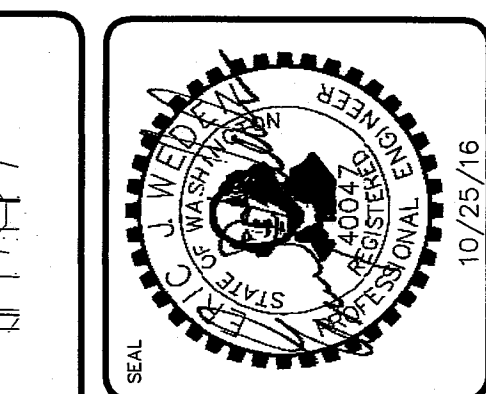
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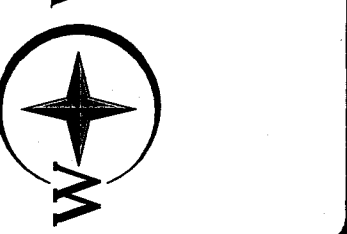
CALL TWO BUSINESS DAYS
BEFORE YOU DIG
WASHINGTON STATE ONE-CALL
1-800-424-5555
IT'S THE LAW! (RCW 19.122)

- NOTE:
1. EXISTING SANITARY SEWER SERVICES TO BE REMOVED WILL BE CAPPED AT THE MAIN LINE TEE AND THE EXISTING PIPE WILL BE REMOVED.
 2. WATER METER SETTERS WILL BE INSTALLED PER COF STANDARD DETAIL W-5.
 3. THE MAINLINE WATER SYSTEM REQUIRES A MINIMUM OF 36 INCHES OF COVER.
 4. WATERLINE FITTINGS ARE SHOWN WITH GENERIC SYMBOLS. CONTRACTOR TO SEE FITTING LABELS FOR TYPE, SIZE, AND CONNECTION TYPE.
 5. CONTRACTOR TO DEFLECT IN PIPE PER MANUFACTURERS SPECIFICATIONS, MAXIMUM DEFLECTION ANGLE 5° OR AT A MINIMUM 230' RADIUS.

AS-BUILT REVISED PER CITY REVIEW 10/13/16



WEDEN ENGINEERING, LLC
Civil Engineering • Planning • Project Management
2636 Nubgaard Rd, Ferndale, WA 98248
(360) 380-1363 (360) 380-3615 FX
email: info@wedenengineering.com



APPROVED
DEC 12 2016
BY: CITY OF FERNDALE

AS-BUILTS

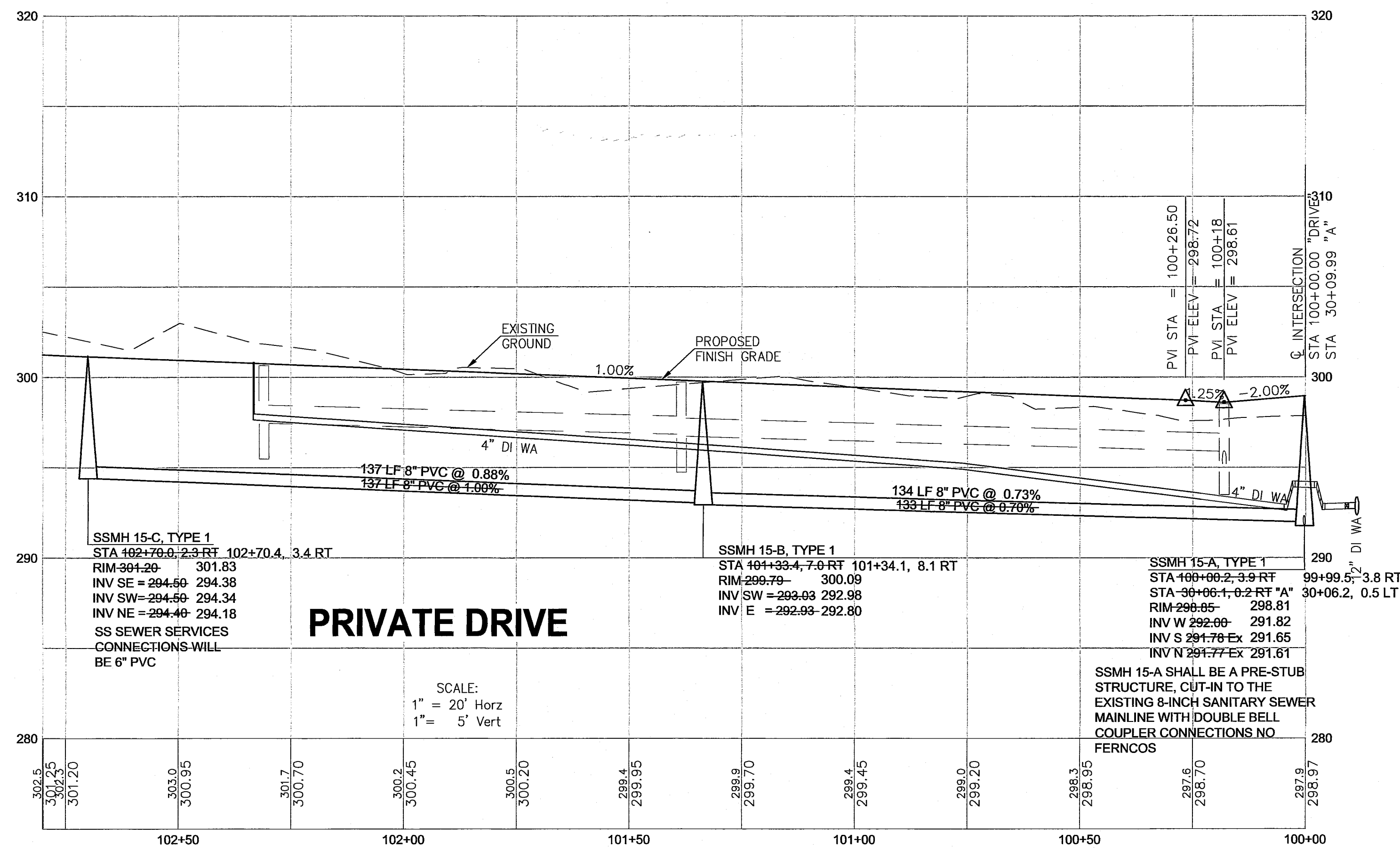
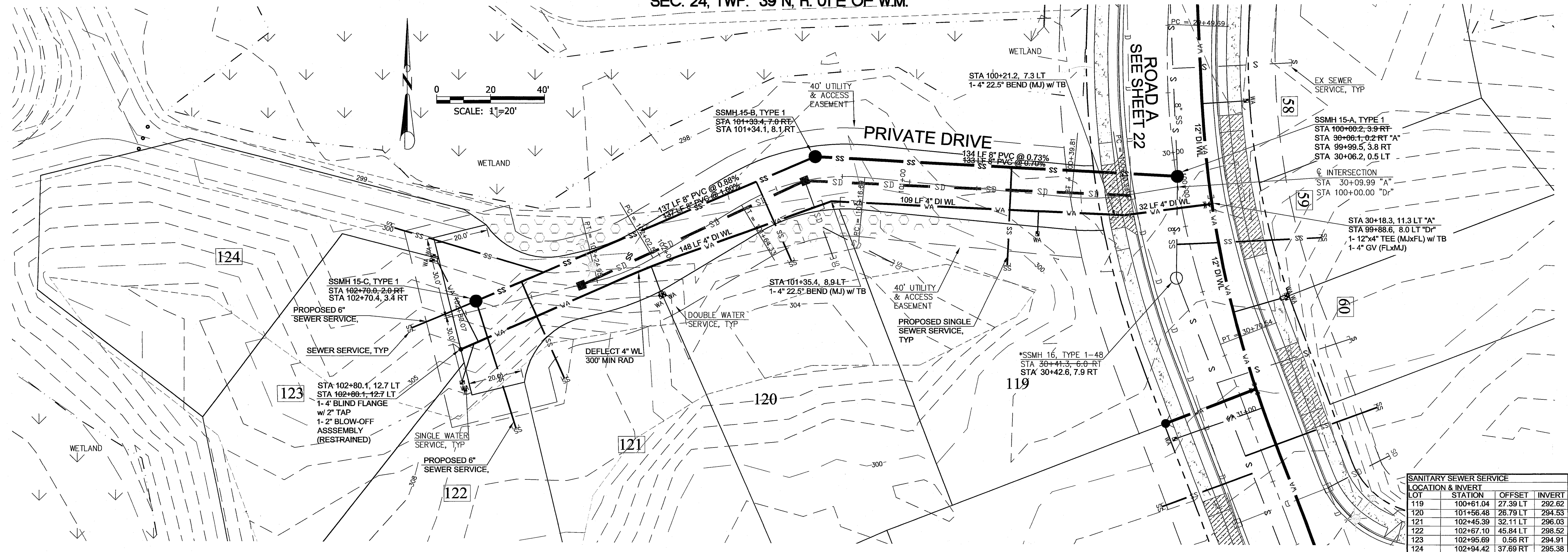
PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDAL, WA

DRAWING TITLE
ROAD J & SS-1 PLAN & PROFILE

DATE: 01/16/2015
DRAWING No.
29 of 39

Kenny 10/25/16 11:43am - P:\3308-02_The Meadows PH-II\ CAD Construction\A=bulld\3308 PH2-30-SSS.dwg

SEC. 24, TWP. 39 N, R. 01 E OF W.M.



NOTE:
1. EXISTING SANITARY SEWER SERVICES TO BE REMOVED WILL BE CAPPED AT THE MAIN LINE TEE AND THE EXISTING PIPE WILL BE REMOVED.
2. WATER METER SETTERS WILL BE INSTALLED PER COF STANDARD DETAIL W-5.
3. THE MAINLINE WATER SYSTEM REQUIRES A MINIMUM OF 36 INCHES OF COVER.
4. WATERLINE FITTINGS ARE SHOWN WITH GENERIC SYMBOLS. CONTRACTOR TO SEE FITTING LABELS FOR TYPE, SIZE, AND CONNECTION TYPE.
5. CONTRACTOR TO DEFLECT DI PIPE PER MANUFACTURES SPECIFICATIONS, MAXIMUM DEFLECTION ANGLE 5° OR AT A MINIMUM 230' RADIUS.

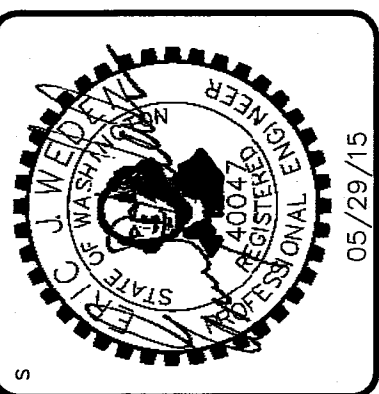
AS-BUILT REVISED PER CITY REVIEW 10/13/16

No.	REVISIONS / SUBMISSIONS	DATE
1	AS-BUILT INFORMATION	03/21/16
2	REVISIONS PER CITY COMMENTS	05/29/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15
6	REVISIONS PER CITY COMMENTS	03/02/15

REVIEWED BY: E.W. DRAWN BY: KLS
PROJECT NO.: 1308-02
CAD FILE:

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDALE, WA
DRAWING TITLE
PRIVATE DRIVE PLAN & PROFILE

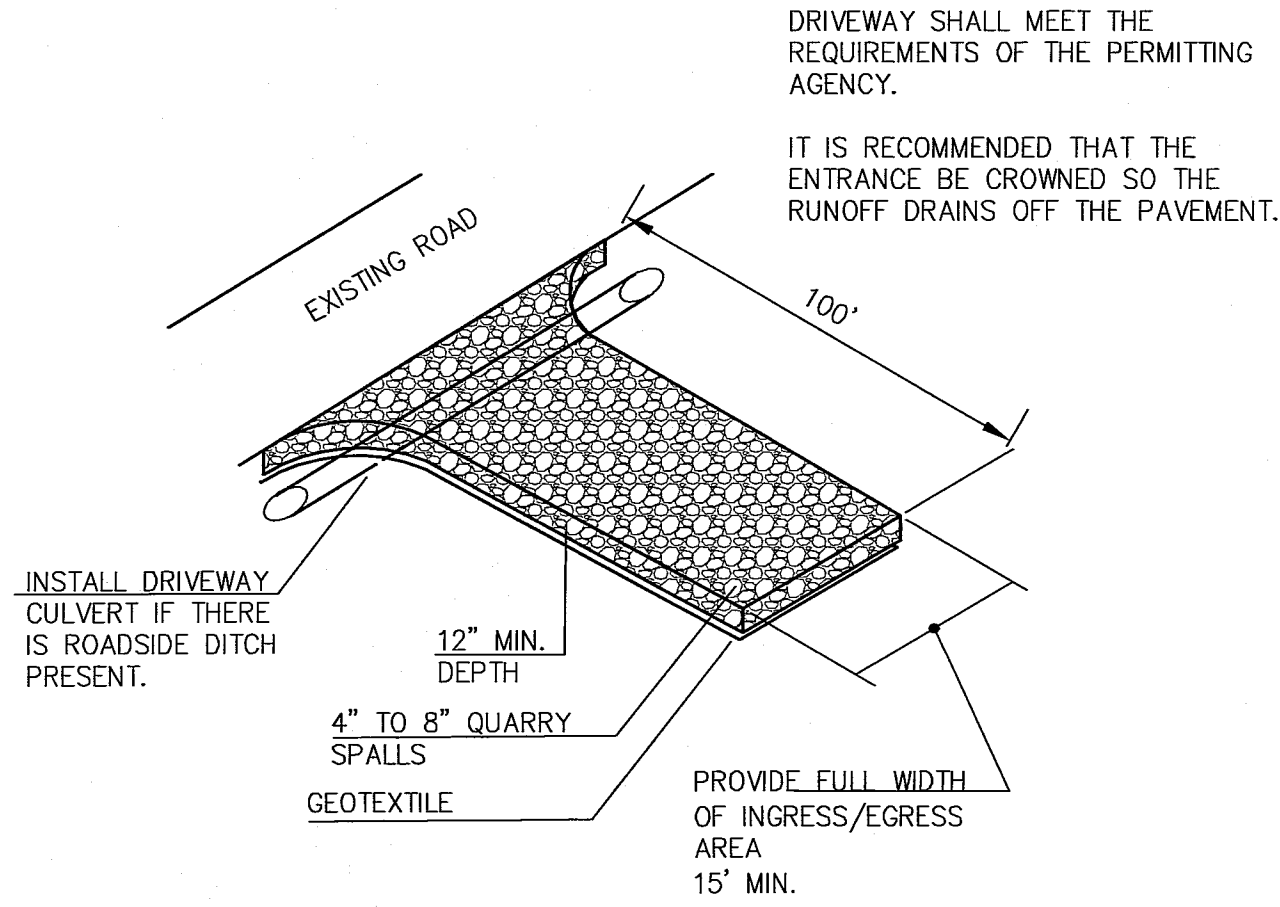
DATE : 01/16/2015
DRAWING No.
30 of 39



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Civil Engineering • Planning • Project Management
2636 Nubgaard Rd, Ferndale, WA 98248
(360) 380-1563 (360) 380-3615 FX
email: info@wedenengineering.com

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DEC 12 2016
BY: CITY OF FERNDALE

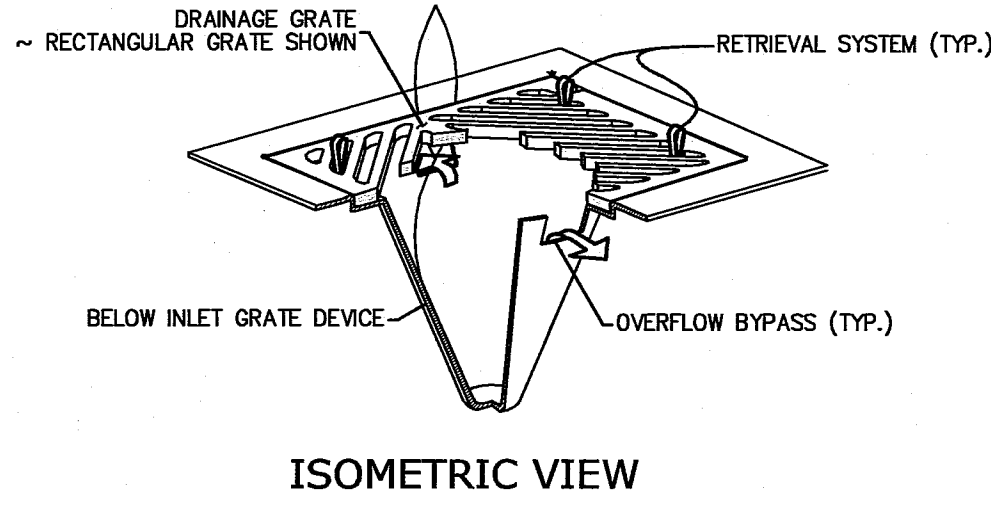
00608, 030 12/23/16 stf



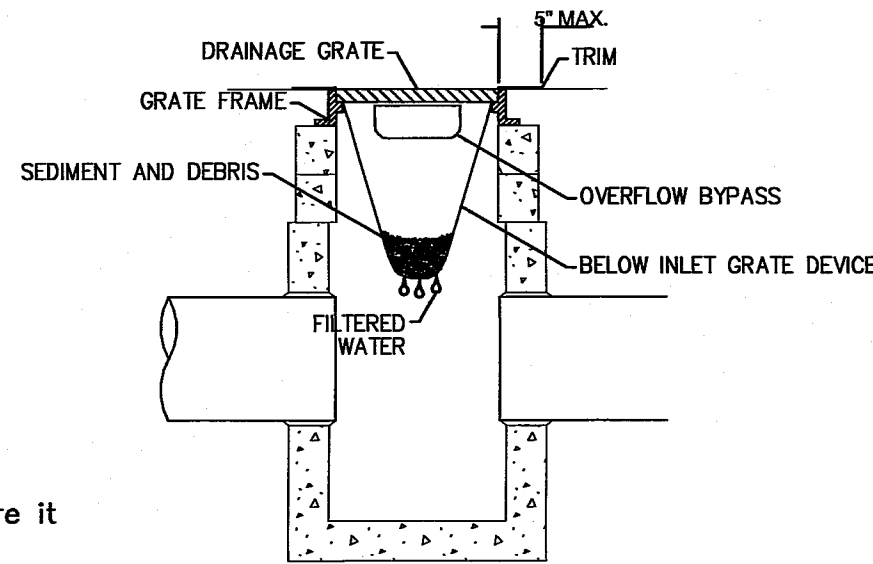
STABILIZED CONSTRUCTION ACCESS

DOE MANUAL BMP C105

N.T.S.

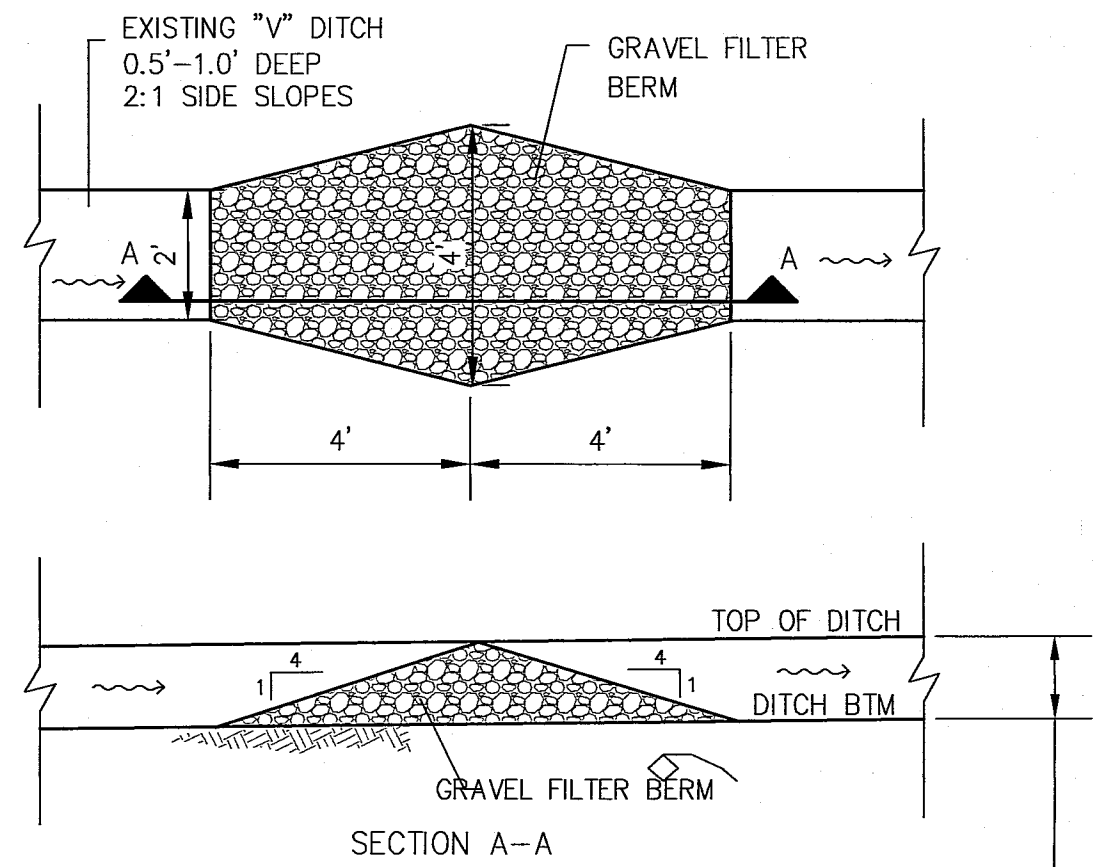


1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).



DETAIL - STORM DRAIN INLET PROTECTION

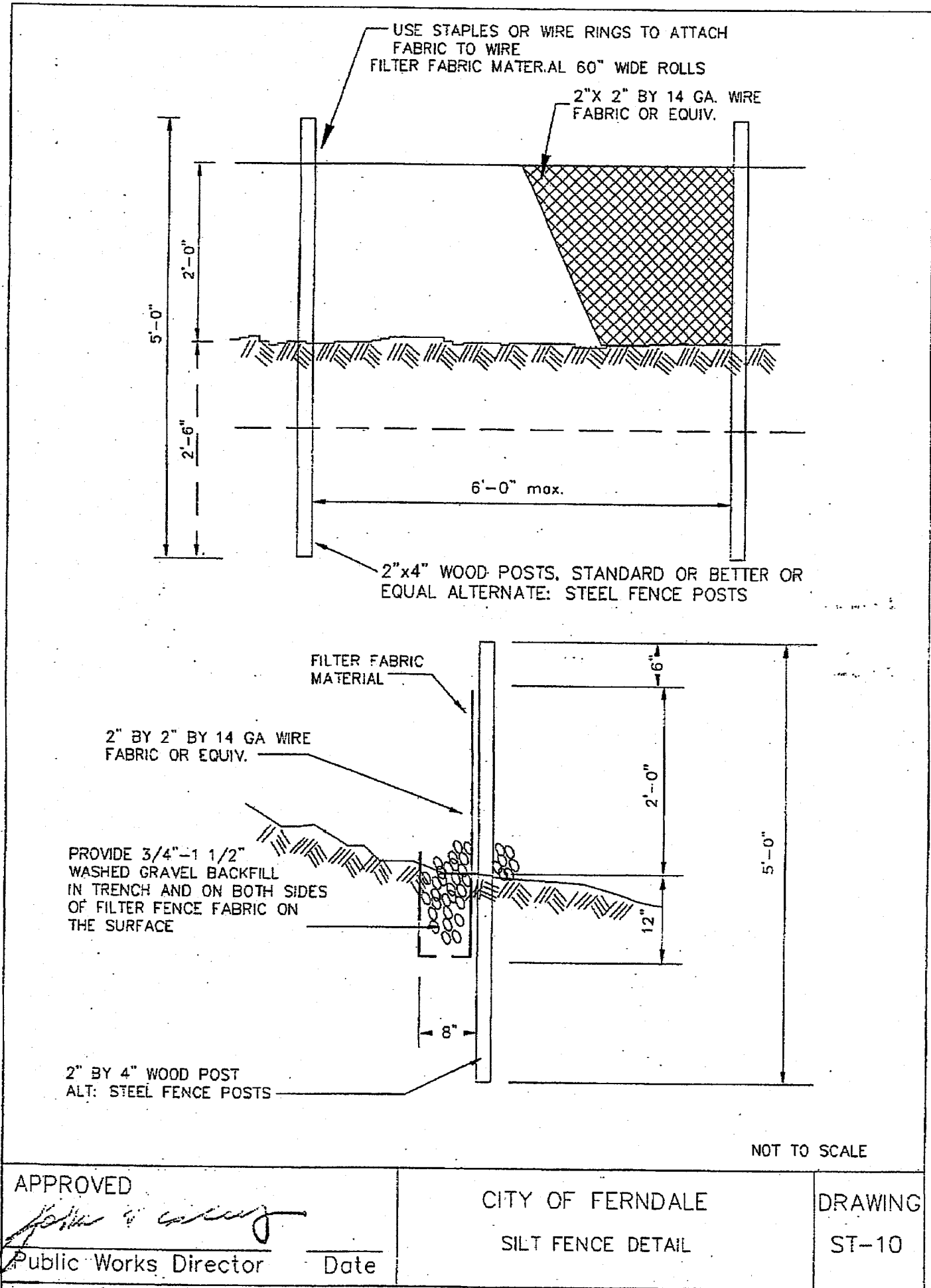
NOT TO SCALE



NOTE:
BERM MATERIAL SHALL BE $\frac{3}{4}$ TO 3 INCHES IN SIZE, WASHED, WELL-GRADED GRAVEL OR CRUSHED ROCK WITH LESS THAN 5 PERCENT FINES.
SEDIMENT SHALL BE REMOVED AND FILTER MATERIAL REPLACED AS NEEDED.

GRAVEL FILTER BERM

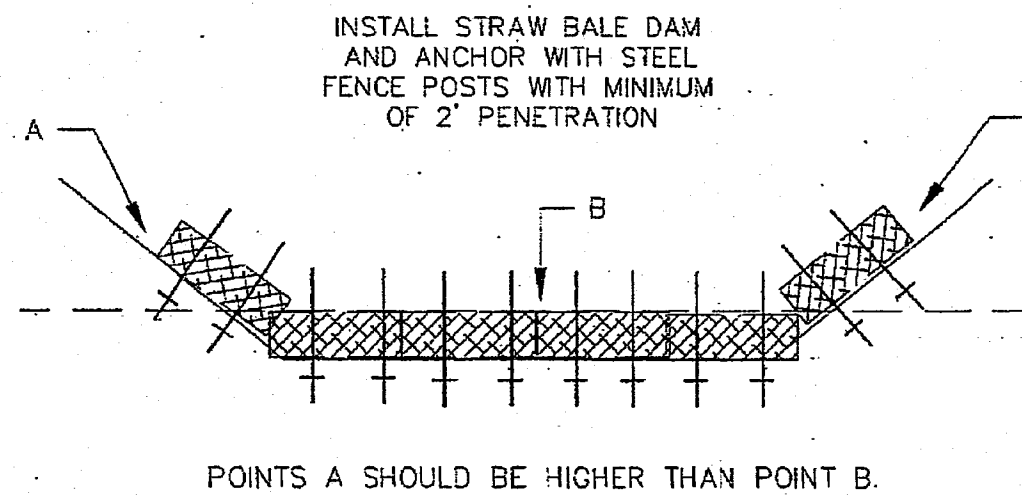
N.T.S.



APPROVED <i>[Signature]</i> Public Works Director	CITY OF FERNDAL SILT FENCE DETAIL	DRAWING ST-10
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JUNE 1995

PROPER PLACEMENT OF A STRAW BALE BARRIER IN A DRAINAGE WAY

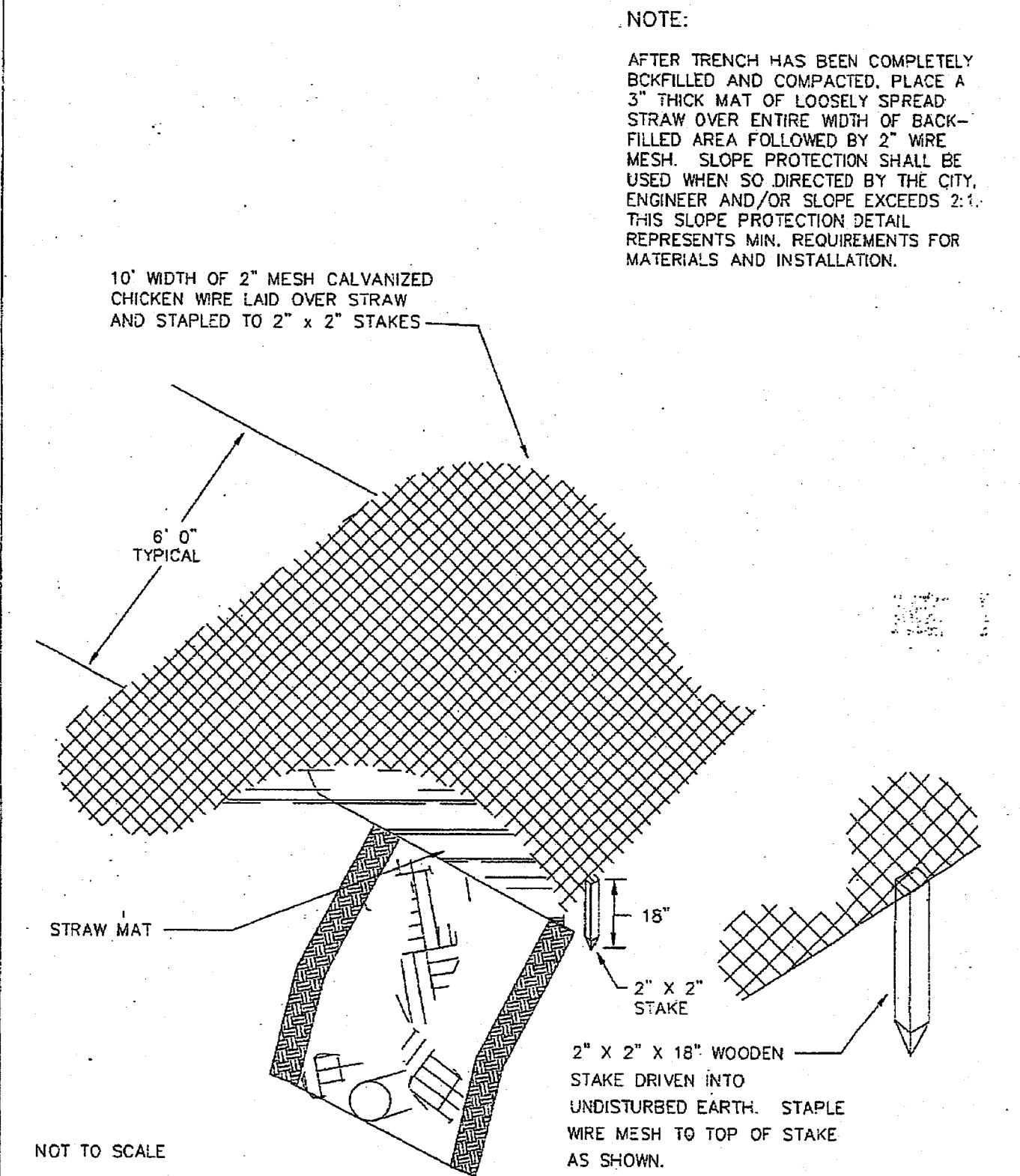


PROPER INSTALLATION OF A STRAW BALE BARRIER

1. EXCAVATE A TRENCH PERPENDICULAR TO THE DIRECTION OF DRAINAGE. THE TRENCH SHOULD BE EXCAVATED THE WIDTH OF A STRAW BALE AND A MINIMUM OF 4" DEEP.
2. PLACE AND STAKE STRAW BALES IN THE TRENCH.
3. WEDGE LOOSE STRAW BETWEEN THE BALES.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL AGAINST THE STRAW BALE BARRIER.

APPROVED <i>[Signature]</i> Public Works Director	CITY OF FERNDAL STRAW BALE DAM DETAIL	DRAWING ST-11
---	--	------------------

JUNE 1995



APPROVED <i>[Signature]</i> Public Works Director	CITY OF FERNDAL SLOPE PROTECTION DETAIL	DRAWING ST-12
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JUNE 1995

AS-BUILTS

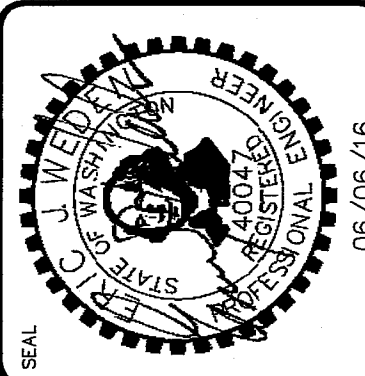
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**THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDAL, WA**

DRAWING TITLE
SWPPP DETAILS

DATE : 01/16/2015
DRAWING NO.

31 of 39

NO.	REVISIONS/ SUBMISSIONS	DATE
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2	REVISIONS PER CITY COMMENTS	05/28/15
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(360) 380-1363 (360) 384-3613 FX
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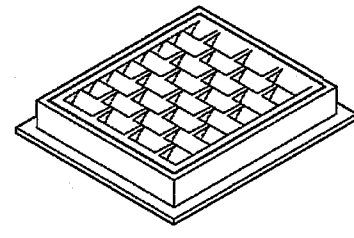
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DEC 12 2016

BY
CITY OF FERNDAL

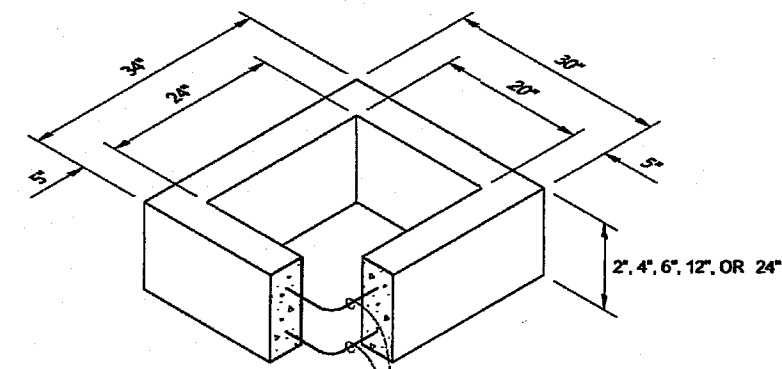
PROJECT NO : 1308-02

00608.031 12/28/16 sht

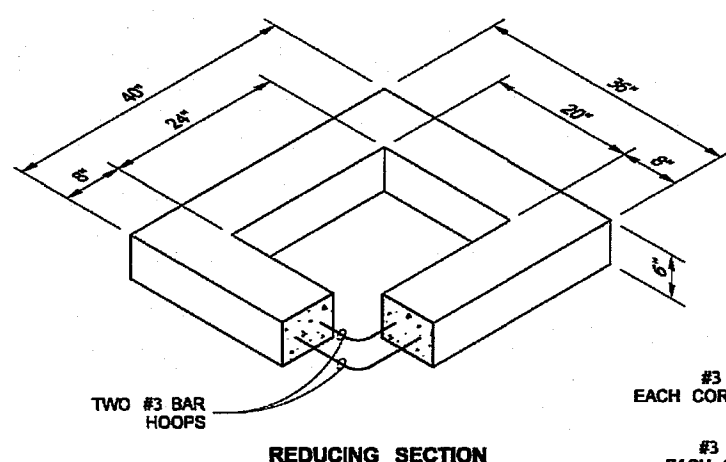
DRAWN BY: LISA OYFORD



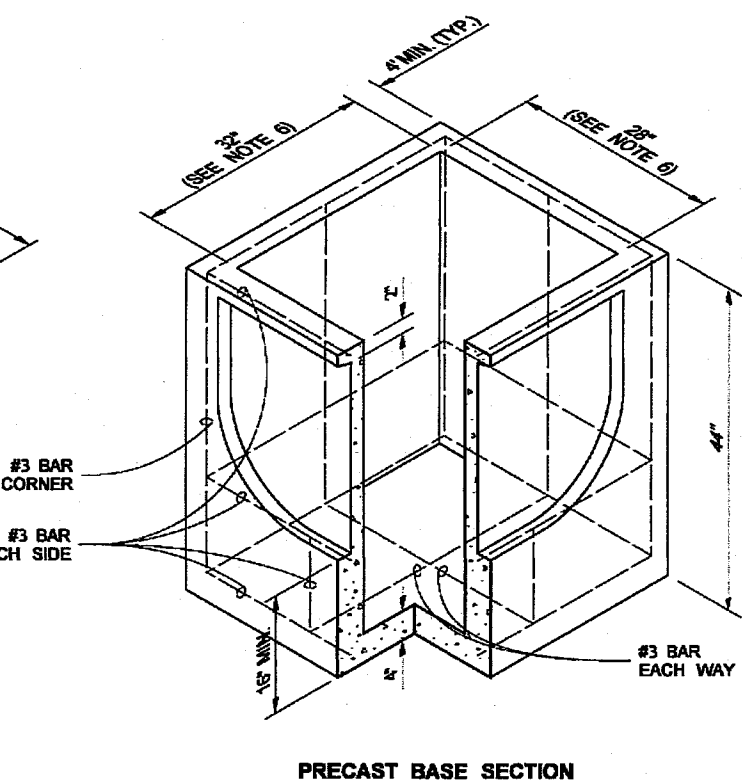
FRAME AND VANED GRATE



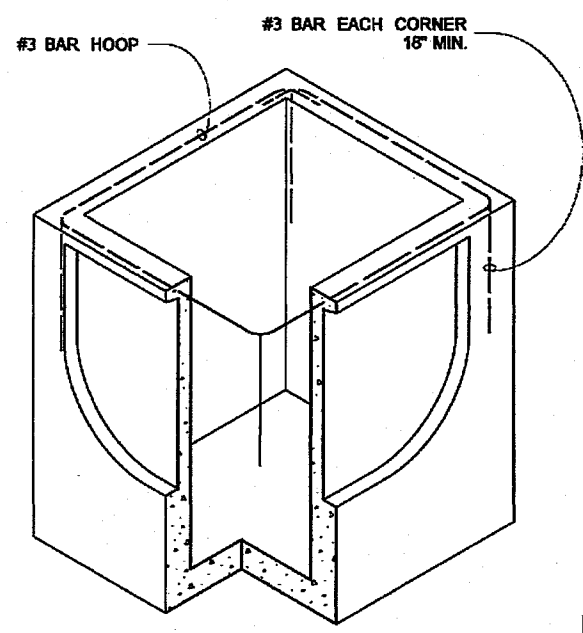
RECTANGULAR ADJUSTMENT SECTION



REDUCING SECTION



PRECAST BASE SECTION



ALTERNATIVE PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSP # (STD. SPEC. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	21"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

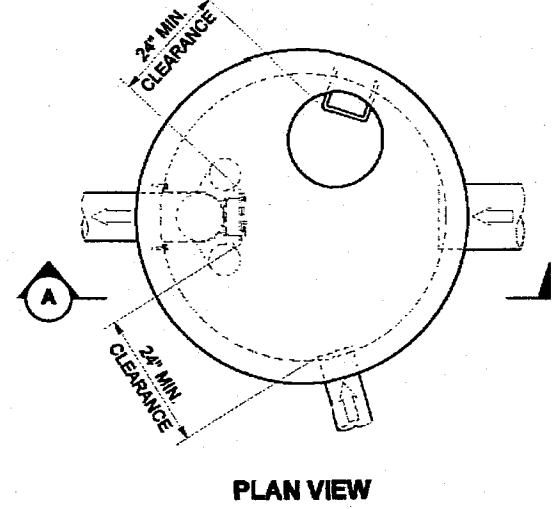
1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot, shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
2. The knockout shall not be greater than 28", in any direction. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate may be installed with the flange down or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
6. The opening shall be measured at the top of the Precast Base Section.
7. All pickup holes shall be grouted full after the basin has been placed.



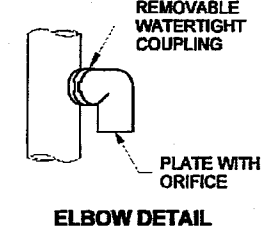
CATCH BASIN TYPE 1L
STANDARD PLAN B-5-40-01

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakotich III 06-16-11
REGISTERED ENGINEER
Washington State Department of Transportation

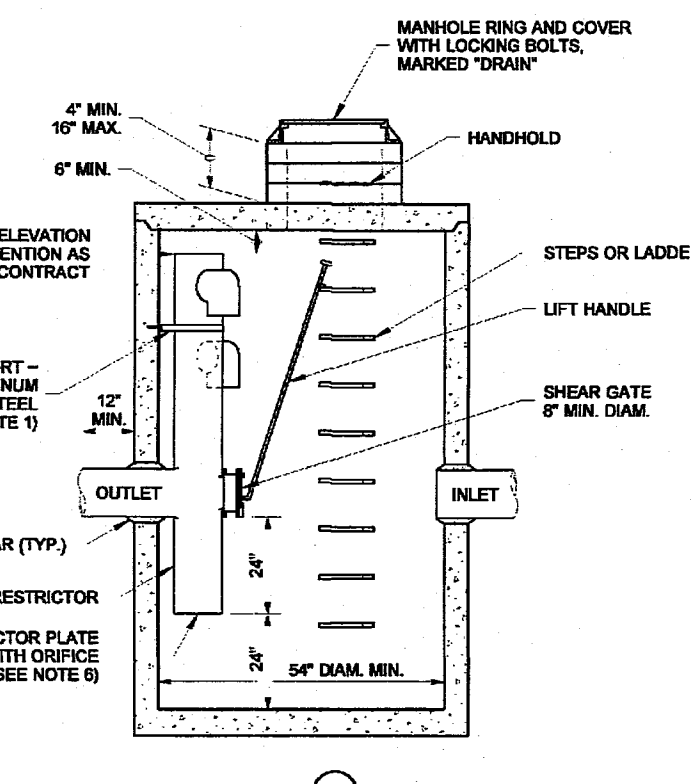
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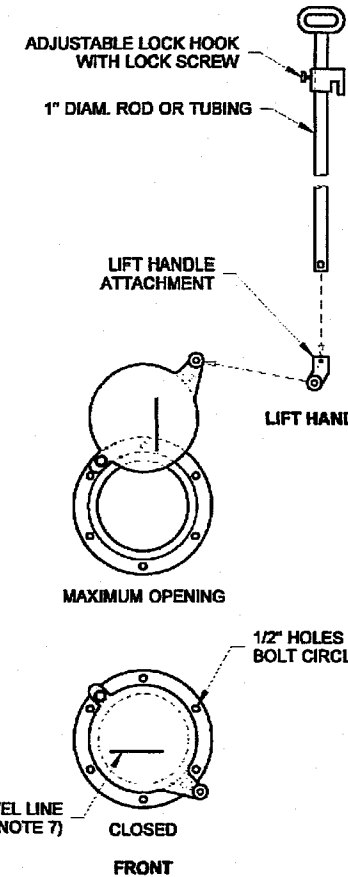
PLAN VIEW



ELBOW DETAIL



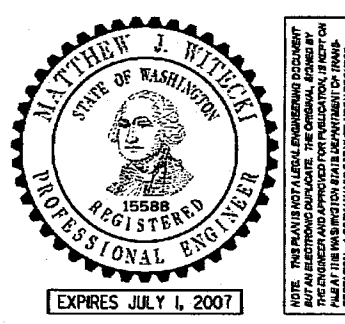
VIEW A



SHEAR GATE DETAILS

NOTES

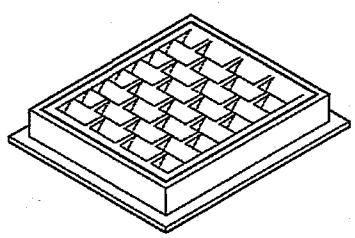
1. The pipe supports and the flow restrictor shall be constructed of the same material and be anchored at a maximum spacing of 36". Attach the pipe supports to the manhole with 5/8" stainless steel expansion bolts or embed the supports into the manhole wall 2".
2. The vertical riser stem of the flow restrictor shall be the same diameter as the horizontal outlet pipe with a minimum diameter of 8".
3. The flow restrictor shall be fabricated from one of the following materials:
0.060" Corrugated Aluminum Alloy Drain Pipe
0.064" Corrugated Galvanized Steel Drain Pipe with Treatment 1
0.064" Corrugated Aluminum Alloy Drain Pipe
0.060" Aluminum alloy flat sheet, in accordance with ASTM B 209, 5052 H32 or EPS
High Density Polyethylene Storm Sewer Pipe
4. The frame and ladder or steps are to be offset so that: the shear gate is visible from the top; the climb-down space is clear of the riser and gate; the frame is clear of the curb.
5. The multi-orifice elbows may be located as shown, or all placed on one side of the riser to assure ladder clearance. The size of the elbows and their placement shall be specified in the Contract.
6. Restrictor plate with orifice as specified in the Contract. The opening is to be cut round and smooth.
7. The shear gate shall be made of aluminum alloy in accordance with ASTM B 26 and ASTM B 275, designation ZG32A; or cast iron in accordance with ASTM A 48, Class 30B.
The lift handle shall be made of a similar metal to the gate (to prevent galvanic corrosion), it may be of solid rod or hollow tubing, with adjustable hook as required.
A neoprene rubber gasket is required between the riser mounting flange and the gate flange. Install the gate so that the level-line mark is level when the gate is closed.
The mating surfaces of the lid and the body shall be machined for proper fit.
All shear gate bolts shall be stainless steel.
8. The shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.
9. Alternative shear gate designs are acceptable if material specifications are met and flange bolt pattern matches.



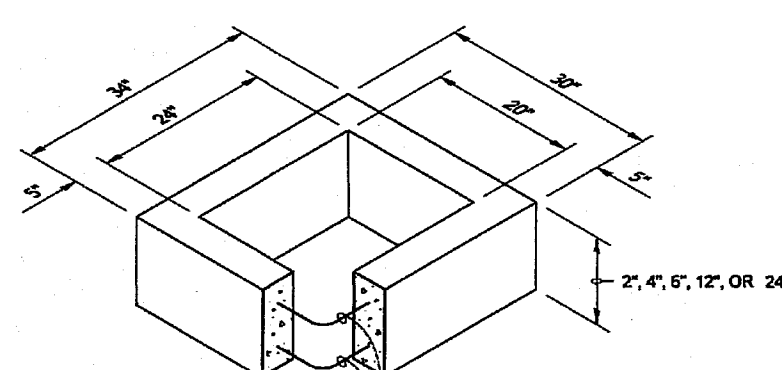
CATCH BASIN TYPE 2
WITH FLOW RESTRICTOR
STANDARD PLAN B-10-40-00

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Harold J. Peterfeso 06-01-06
REGISTERED ENGINEER
Washington State Department of Transportation

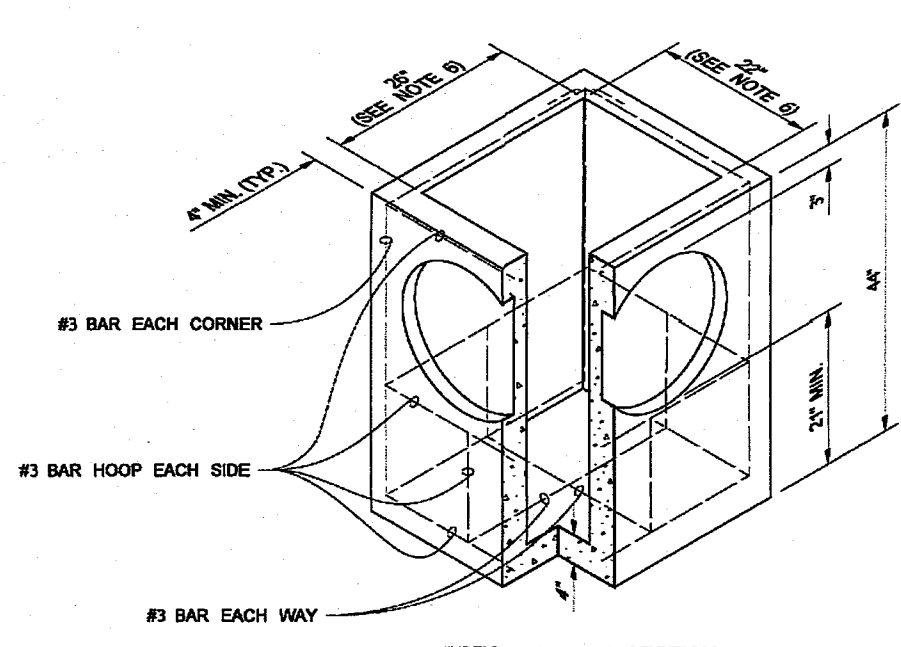
DRAWN BY: LISA OYFORD



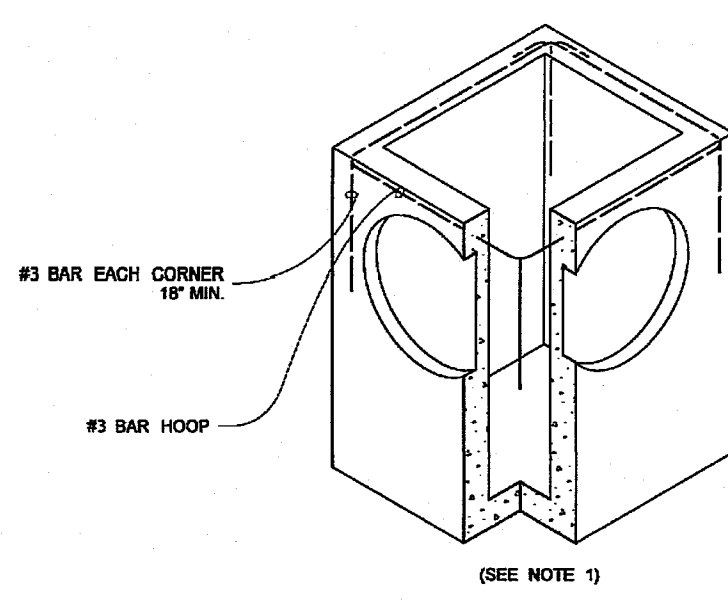
FRAME AND VANED GRATE



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



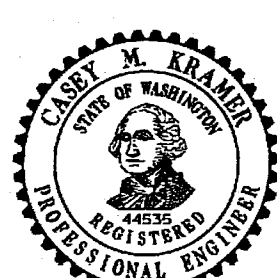
ALTERNATIVE PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSP # (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

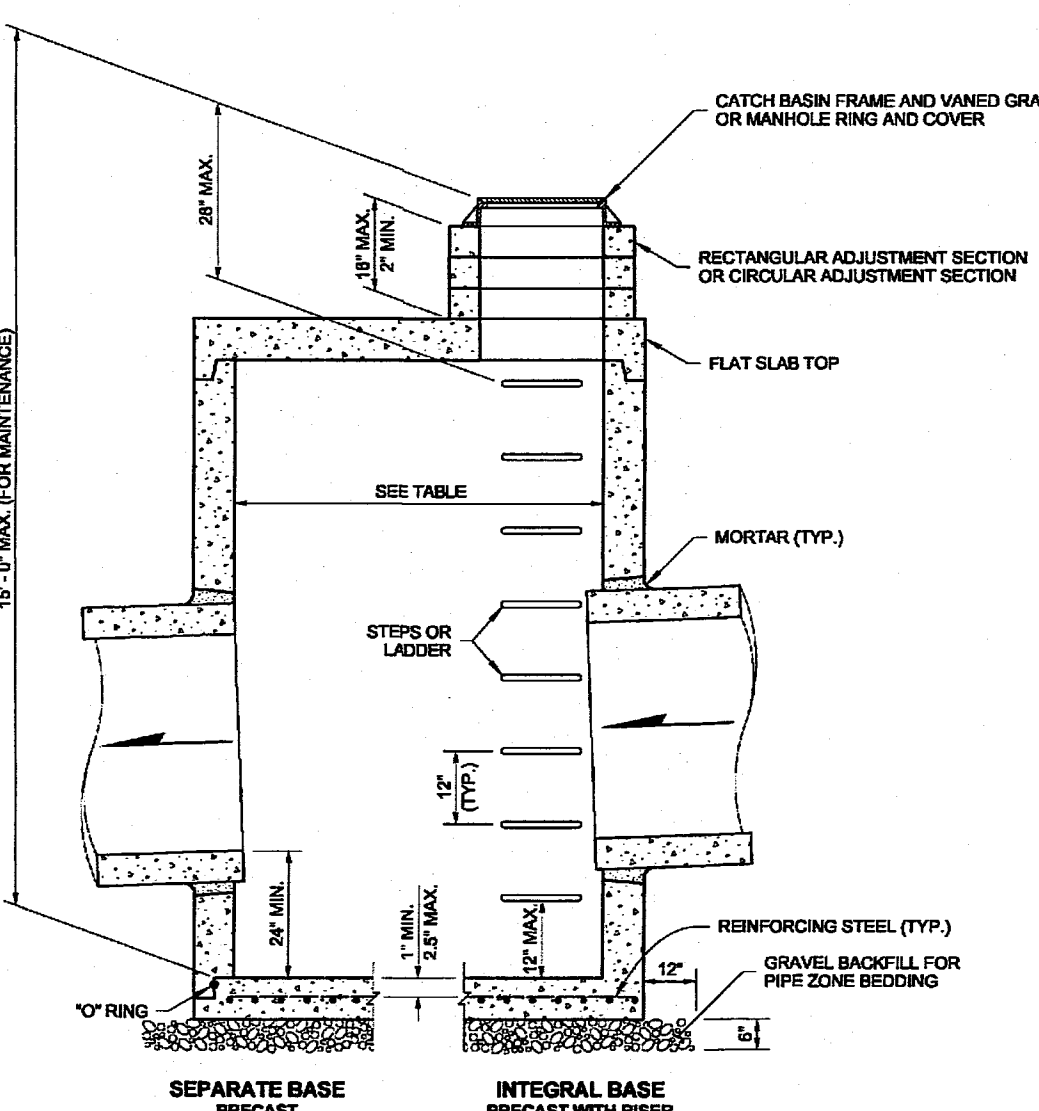
1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
6. The opening shall be measured at the top of the Precast Base Section.
7. All pickup holes shall be grouted full after the basin has been placed.



CATCH BASIN TYPE 1
STANDARD PLAN B-5-20-01

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakotich III 06-16-11
REGISTERED ENGINEER
Washington State Department of Transportation

DRAWN BY: LISA OYFORD



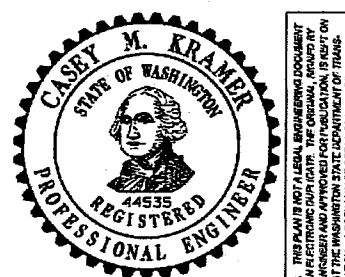
SEPARATE BASE PRECAST

INTEGRAL BASE PRECAST WITH REBAR (48" - 72" ONLY)

CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES				
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER	ALL METAL	CPSP #	SOLID WALL PVC
48"	24"	30"	24"	30"
54"	30"	36"	30"	36"
60"	36"	42"	36"	42"
72"	42"	54"	42"	48"
84"	54"	60"	54"	48"
96"	60"	72"	60"	48"
120"	66"	84"	60"	48"
144"	78"	96"	60"	48"

① Corrugated Polyethylene Storm Sewer Pipe (Standard Specification 9-05.20)
② Standard Specification 9-05.12(1)
③ Standard Specification 9-05.12(2)



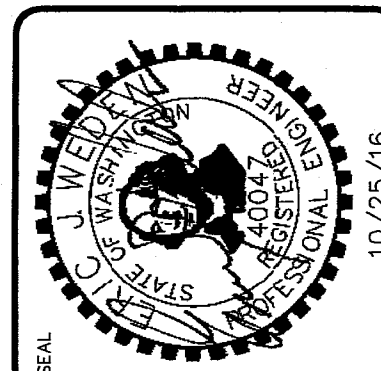
CATCH BASIN TYPE 2
STANDARD PLAN B-10-20-01

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakotich III 02-07-12
REGISTERED ENGINEER
Washington State Department of Transportation

NOTES

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.

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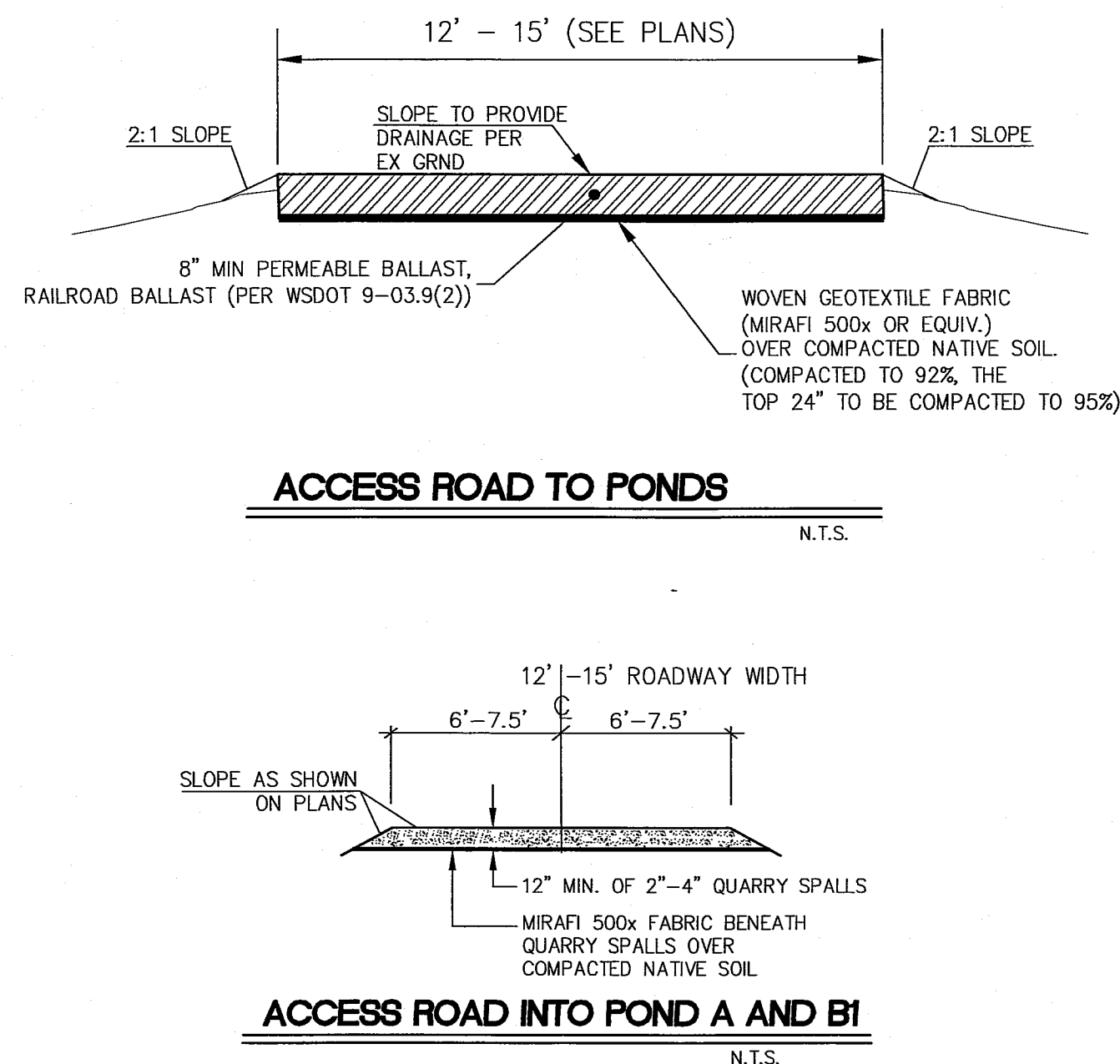
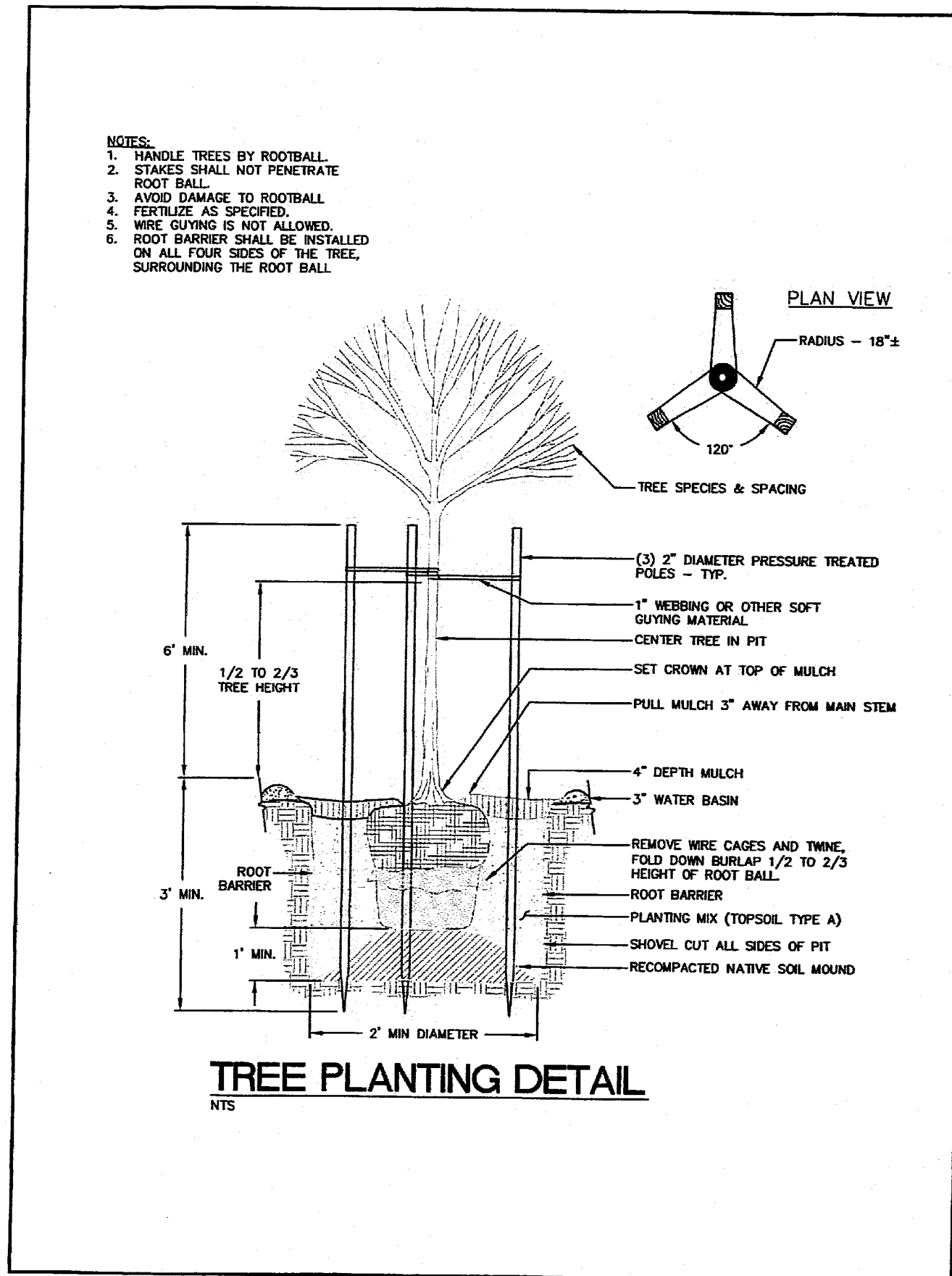
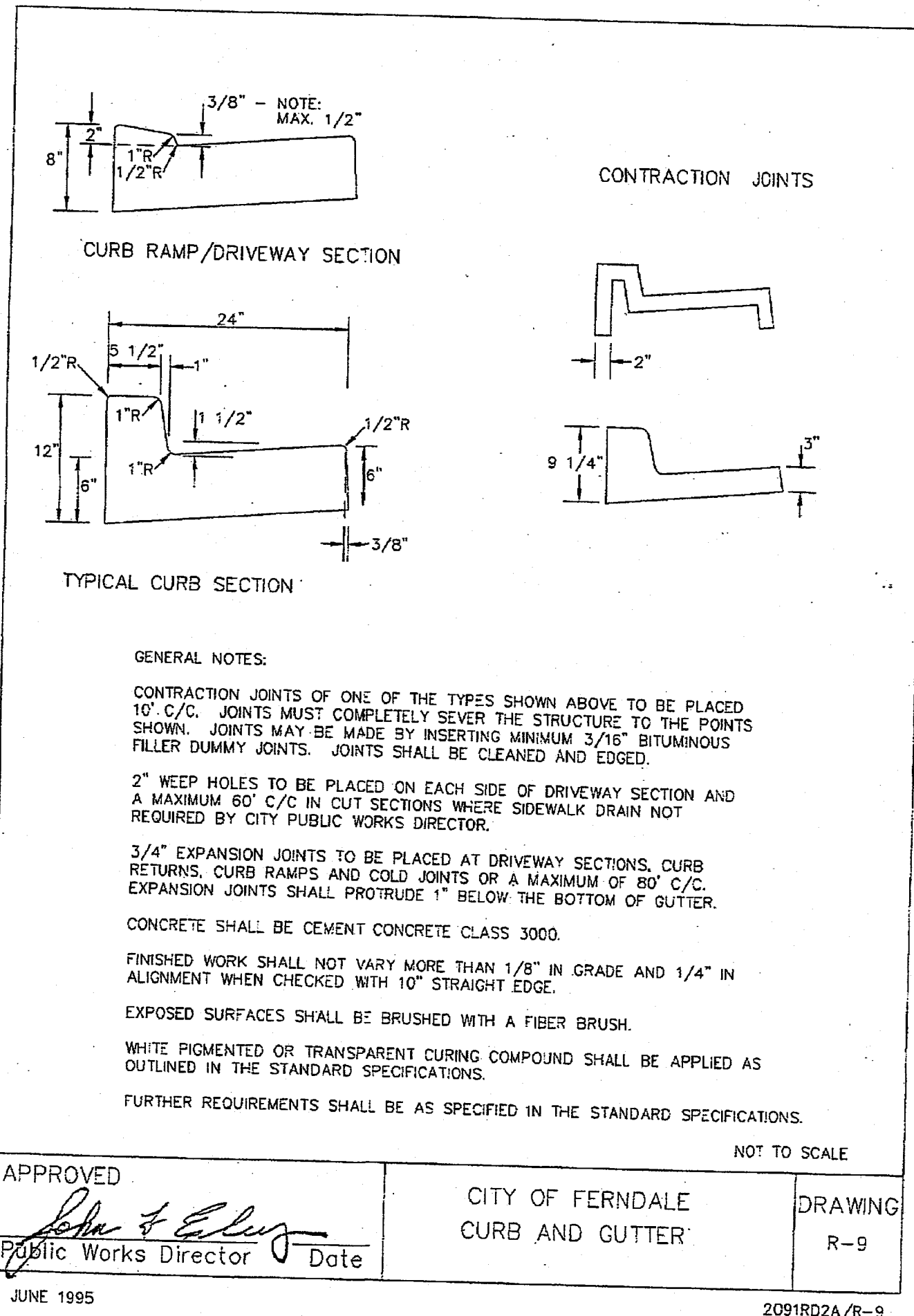
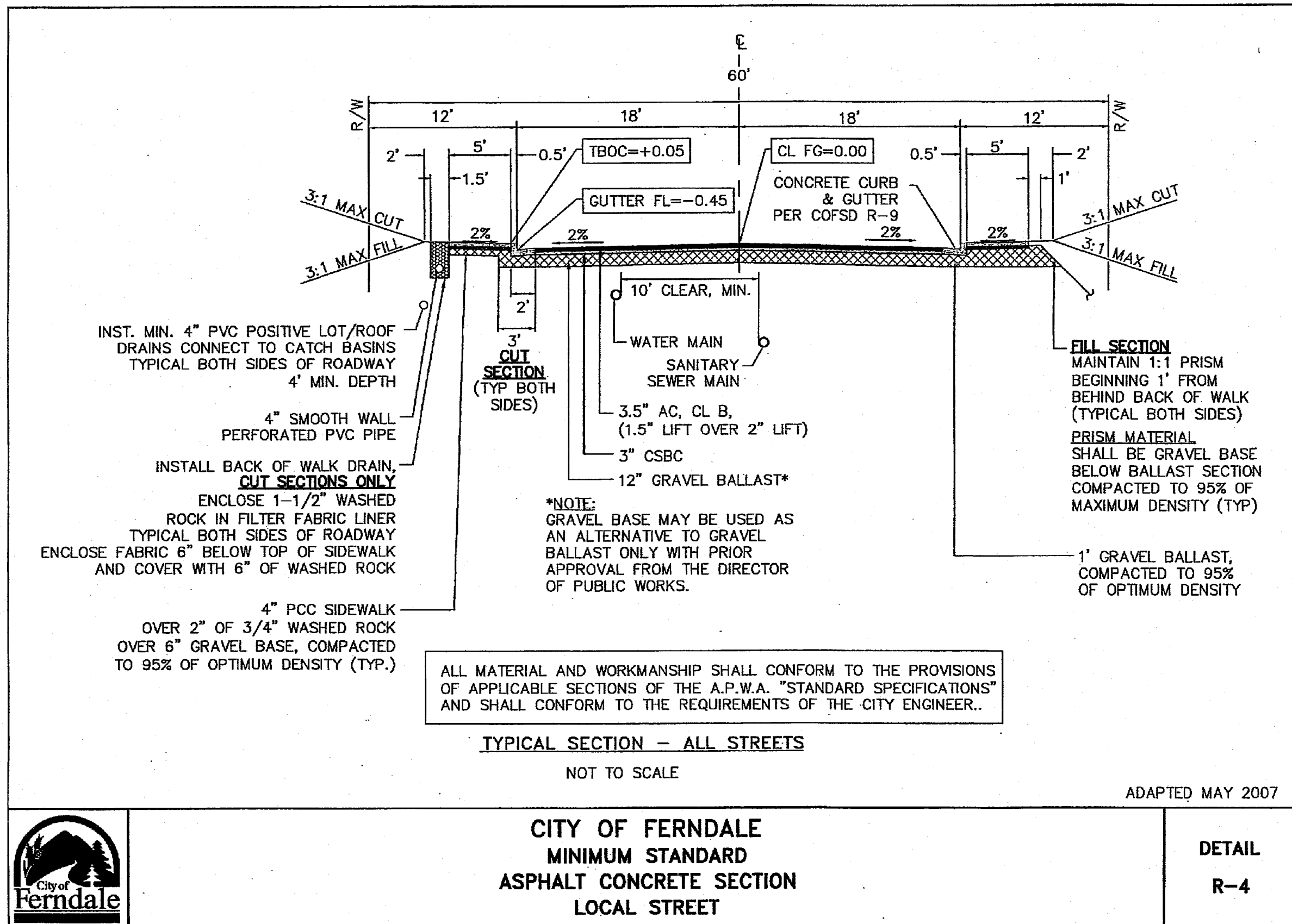
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No.	REVISIONS / SUBMISSIONS	DATE
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2	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15
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THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDAL, WA
STORM DETAILS

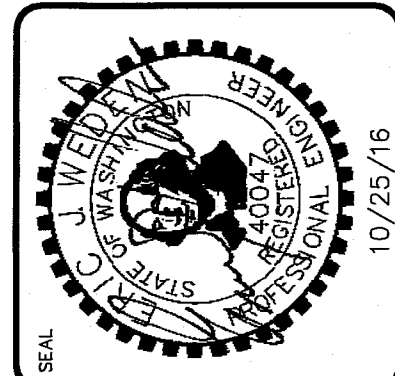
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- Embankment Construction Notes:
1. Pond berm embankments must be constructed on native consolidated soil (or adequately compacted and stable fill soils analyzed by a geotechnical engineer) free of loose surface soil materials, roots, and other organic debris.
 2. Pond berm embankments greater than 4 feet in height must be constructed by excavating a key equal to 50 percent of the berm embankment cross-sectional height and width unless specified otherwise by a geotechnical engineer.
 3. Embankment compaction should be accomplished in such a manner as to produce a dense, low permeability engineered fill that can tolerate post-construction settlements with a minimum of cracking. The embankment fill should be placed on a stable subgrade and compacted to minimum of 95% of the Standard Proctor Maximum Density, ASTM Procedure D698. Placement moisture content should lie within 1% dry to 3% wet of the optimum moisture content. The existing onsite soil may be used for the embankment construction as long as the soil is free of weeds and debris and does not include topsoil. The soil must also have low permeability when compacted. The paramount concerns with these soils are their susceptibility to internal erosion or piping and to surface erosion from wave action and runoff on the upstream and downstream slopes, respectively.
 4. Anti-seepage filter-drain diaphragms must be placed on outflow pipes in berm embankments impounding water with depths greater than 8 feet at the design water surface.

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AS-BUILT INFORMATION	03/21/16
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3 REVISIONS PER CITY COMMENTS	04/14/15
2 REVISIONS PER CITY COMMENTS	03/07/15
1 REVISIONS PER CITY COMMENTS	03/02/15
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CAD FILE:	PROJECT NO.: 1308-02

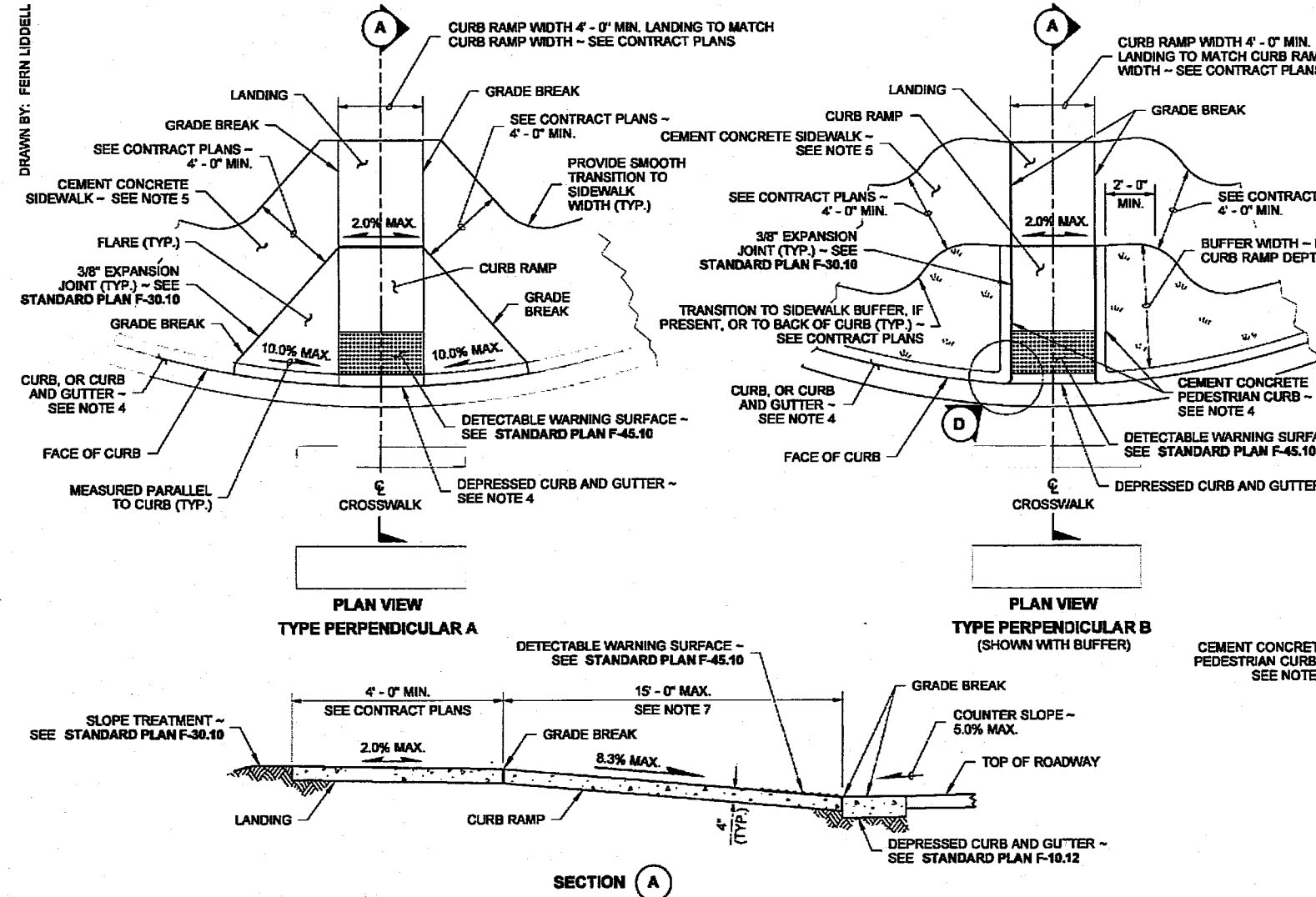
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
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FERNDALE, WA
STREET DETAILS

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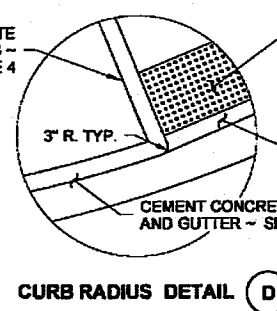
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- NOTES**
1. Provide a separate Curb Ramp for each marked or unmarked crosswalk. Curb Ramp location shall be placed within the width of the associated crosswalk or as shown in the Contract Plans.
 2. Where "GRADE BREAK" is called out, the entire length of the grade break between the two adjacent surface planes shall be flush.
 3. Do not place Gratings, Junction Boxes, Access Covers, or other appurtenances in front of the Curb Ramp or on any part of the Curb Ramp or Landing.
 4. See the Contract Plans for the curb design specified. See Standard Plan F-36.10 for Curb, Curb and Gutter, Depressed Curb and Gutter, and Pedestrian Curb details.
 5. See Standard Plan F-36.10 for Cement Concrete Sidewalk details. See Contract Plans for width and placement of sidewalk.
 6. The Bid Item "Cement Concrete Curb Ramp Type 1" does not include the adjacent Curb, Curb and Gutter, Depressed Curb and Gutter, Pedestrian Curb, or Sidewalk.
 7. The Curb Ramp maximum running slope shall not require the ramp length to exceed 15-feet to avoid chasing the slope indefinitely when connecting to steep grades. When applying the 15-foot maximum length, the running slope of the Curb Ramp shall be as flat as feasible.
 8. Curb Ramp, Landing, and Flares shall receive broom finish. See Standard Specifications 8-14.

LEGEND

SLOPE IN EITHER DIRECTION



PERPENDICULAR CURB RAMP

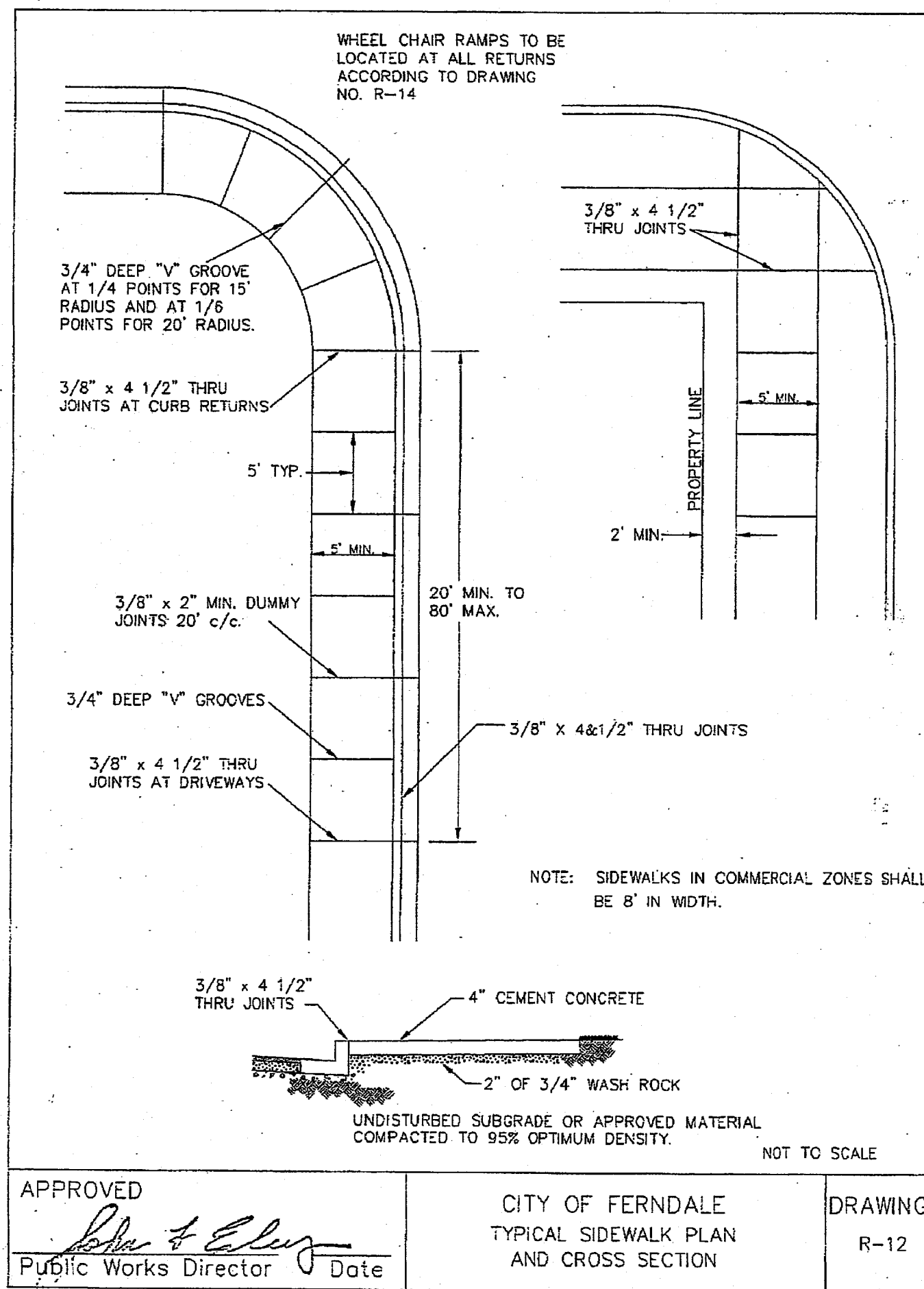
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SHEET 1 OF 1 SHEET

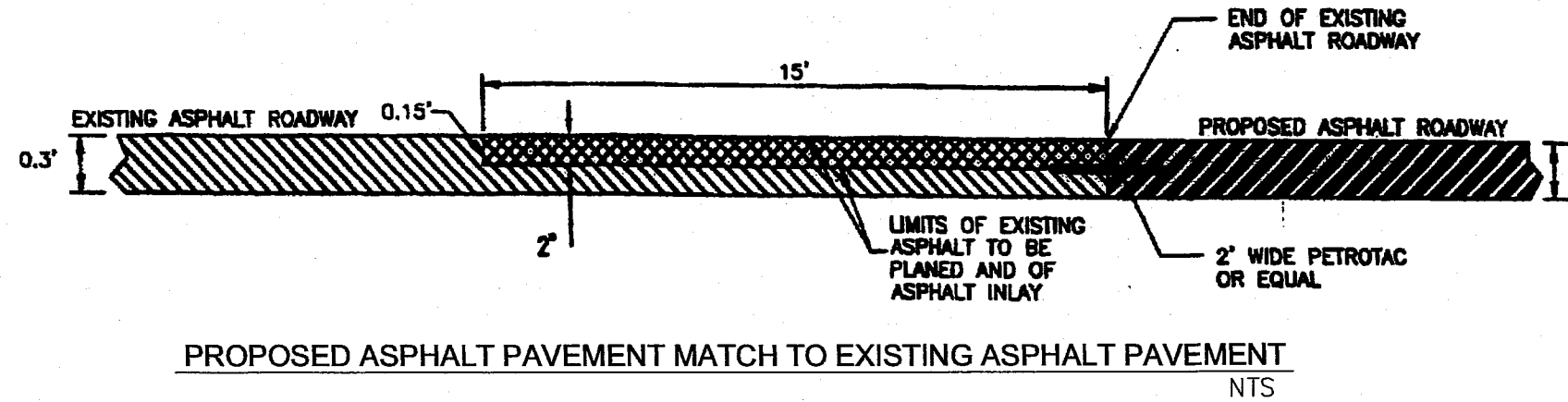
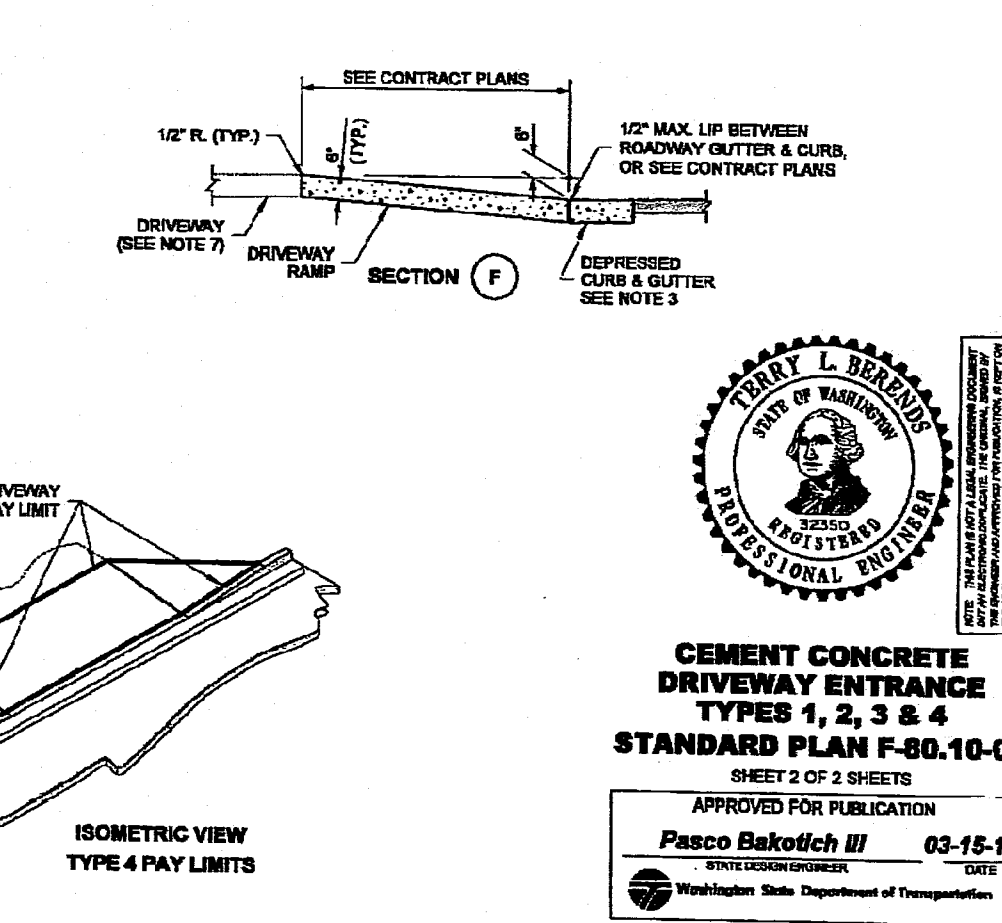
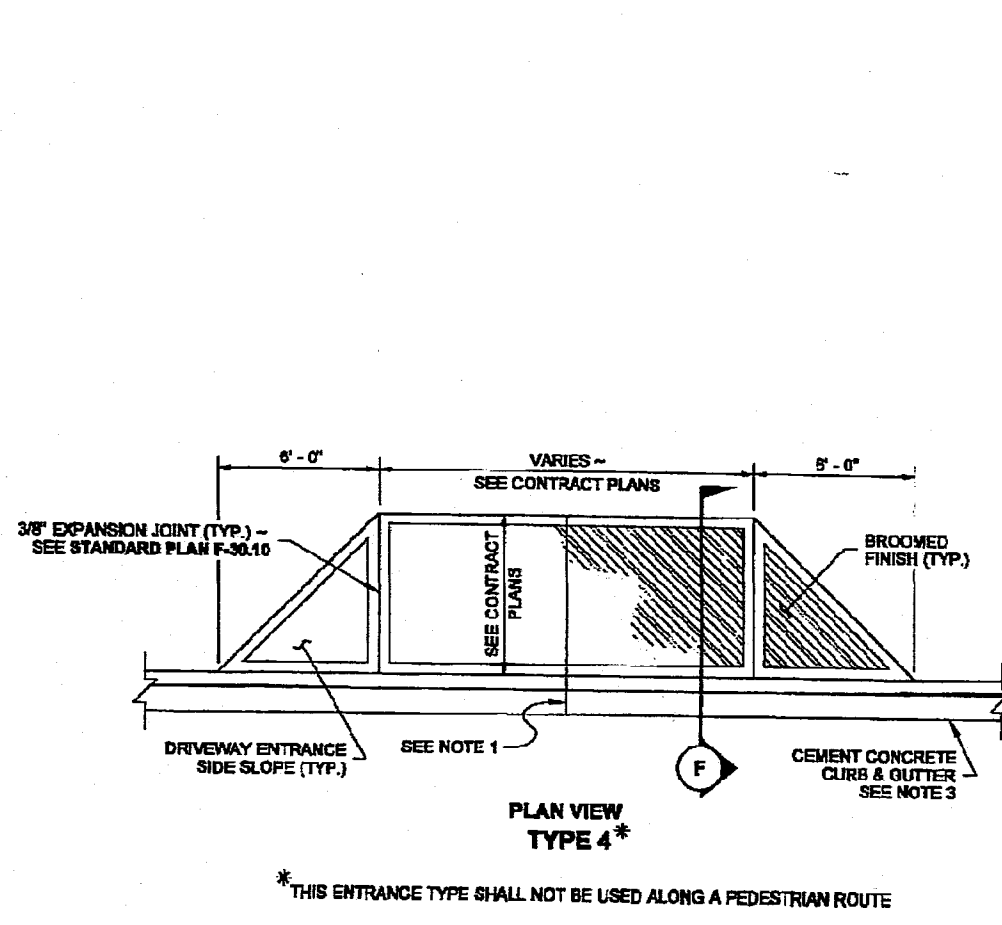
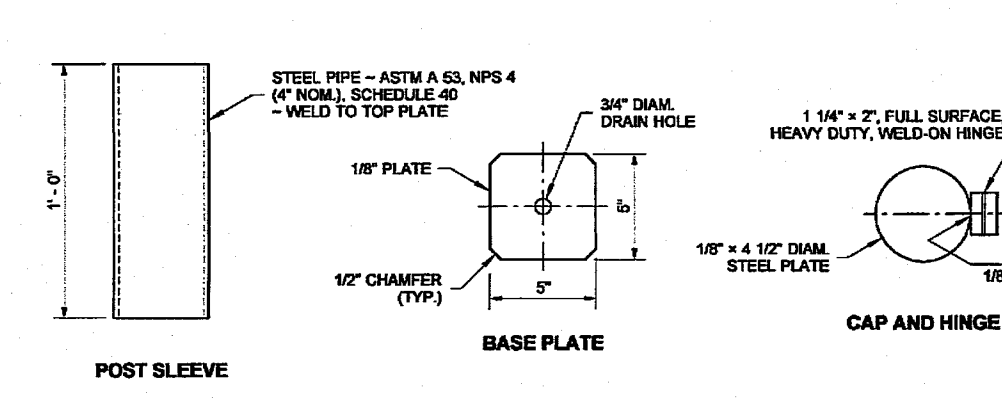
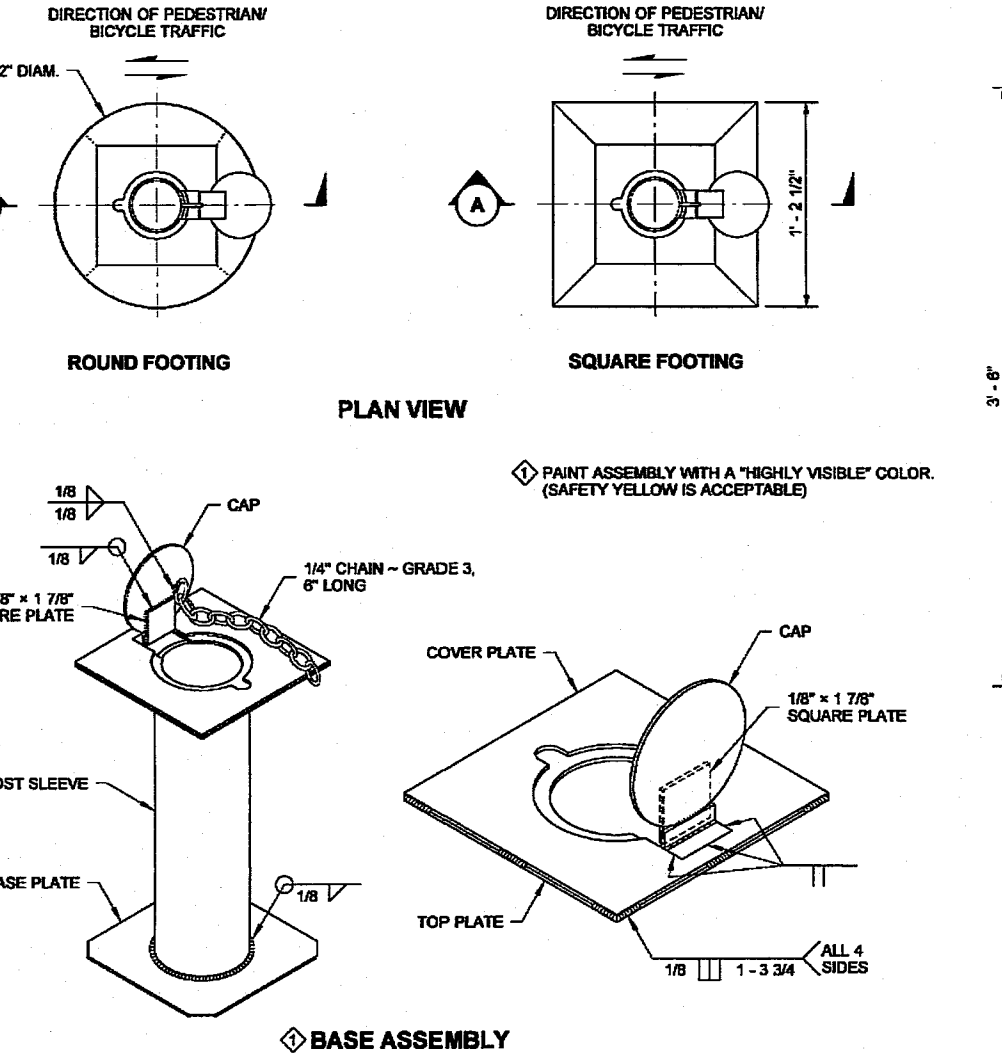
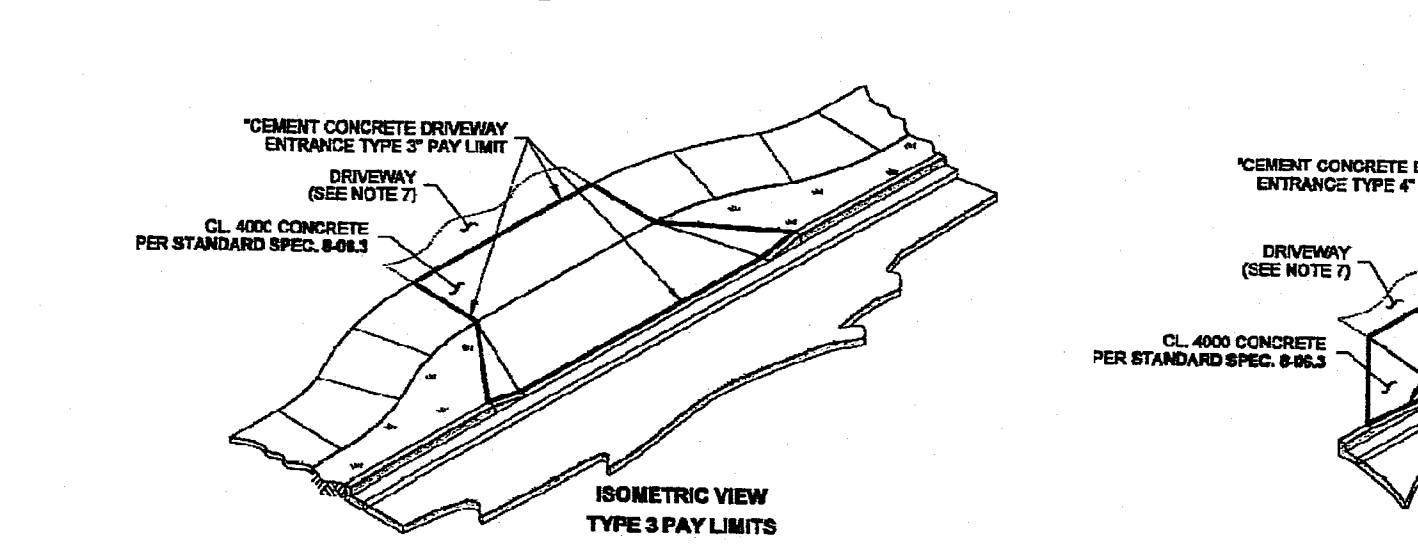
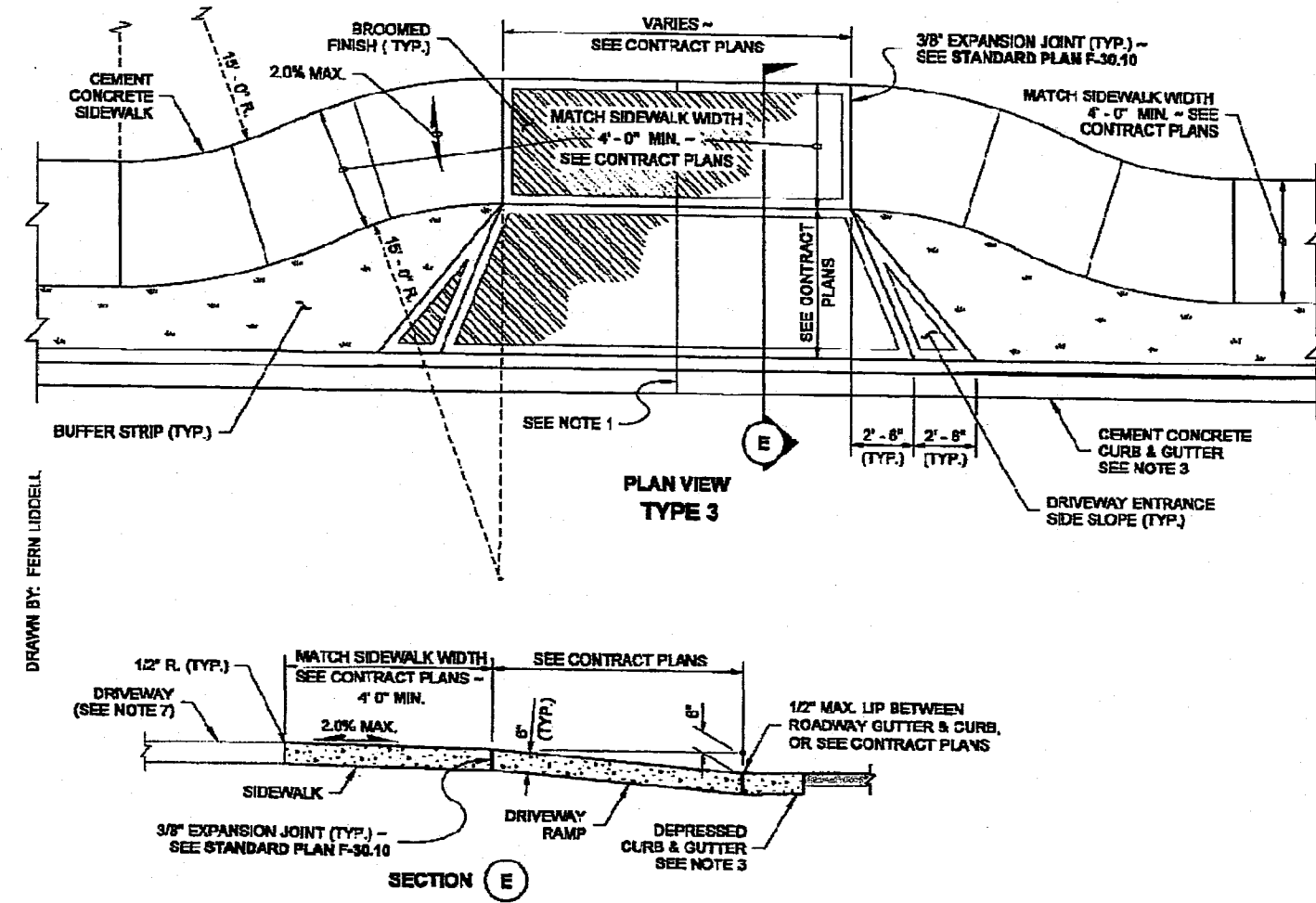
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Pasco Bakotich III 6/20/13

Washington State Department of Transportation



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Public Works Director
CITY OF FERDALE
TYPICAL SIDEWALK PLAN
AND CROSS SECTION
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R-12
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2091R02A/R-12



AS-BUILTS

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERDALE, WA
DRAWING TITLE
STREET DETAILS

DATE : 01/16/2015
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35 of 39

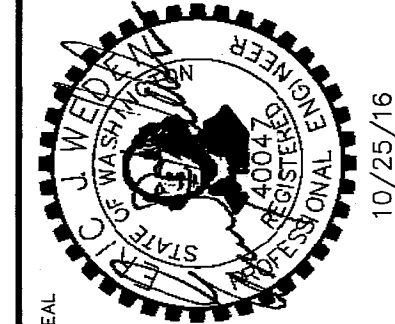
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STANDARD PLAN H-60.10-01
SHEET 1 OF 1 SHEET
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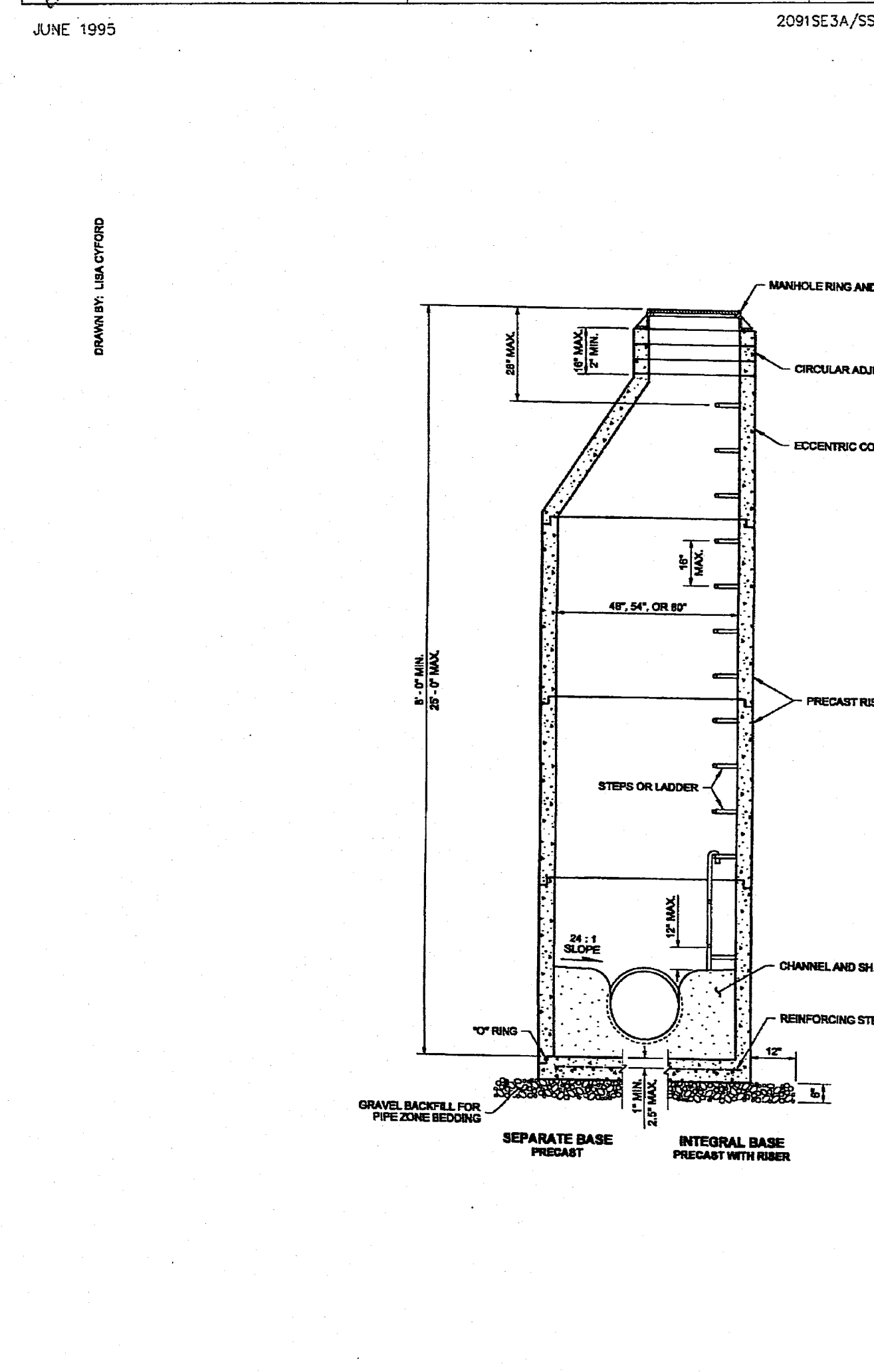
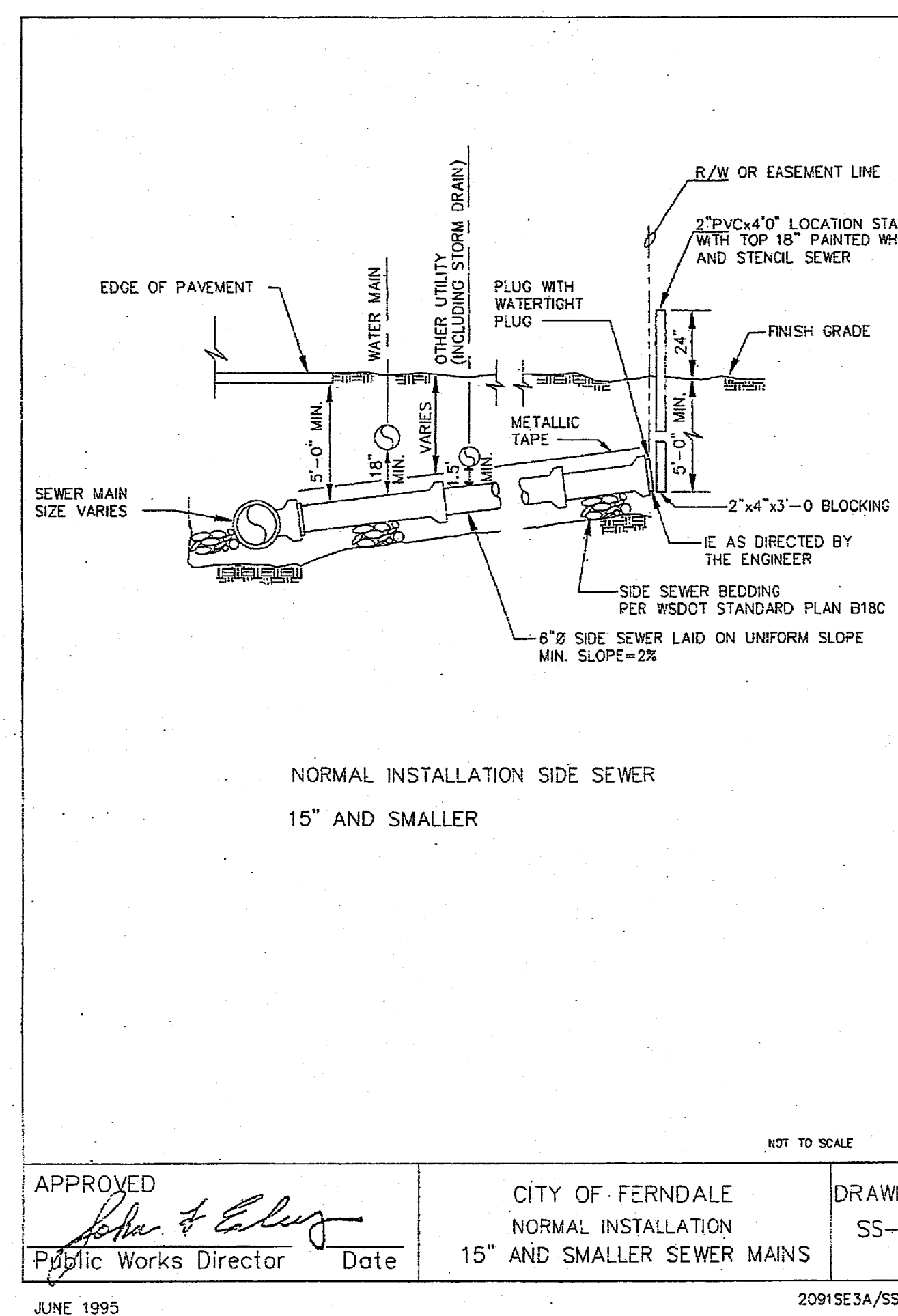
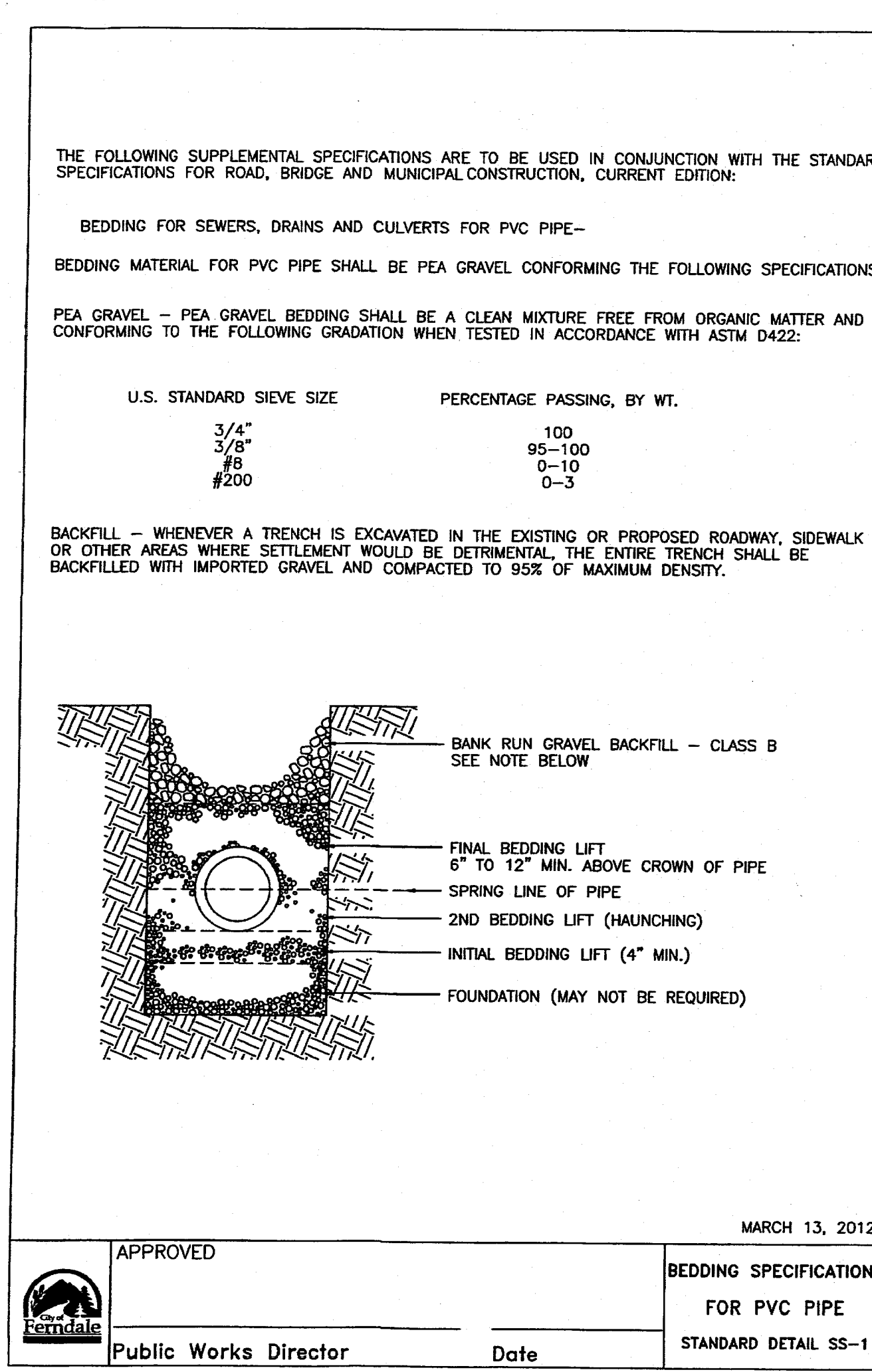
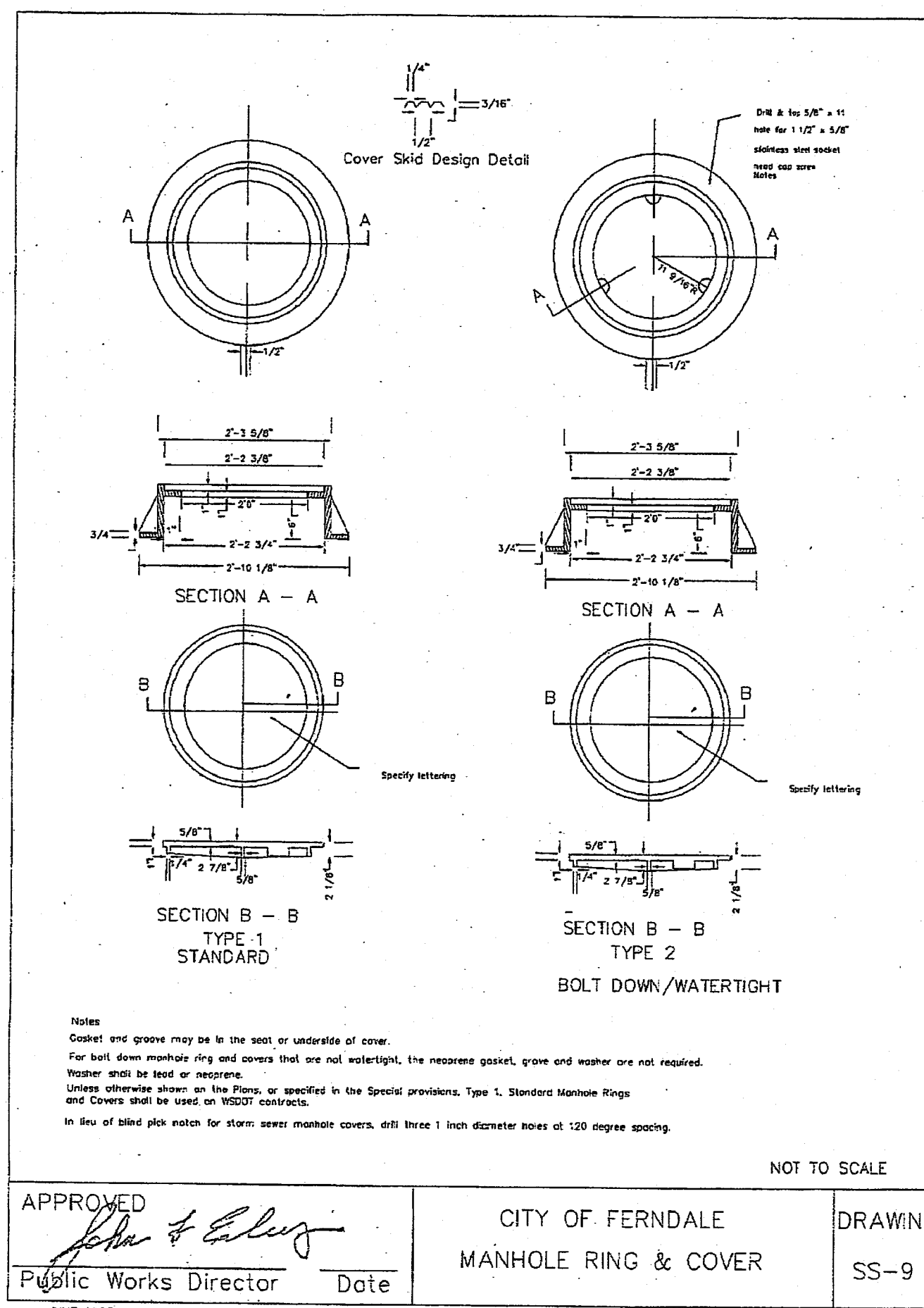
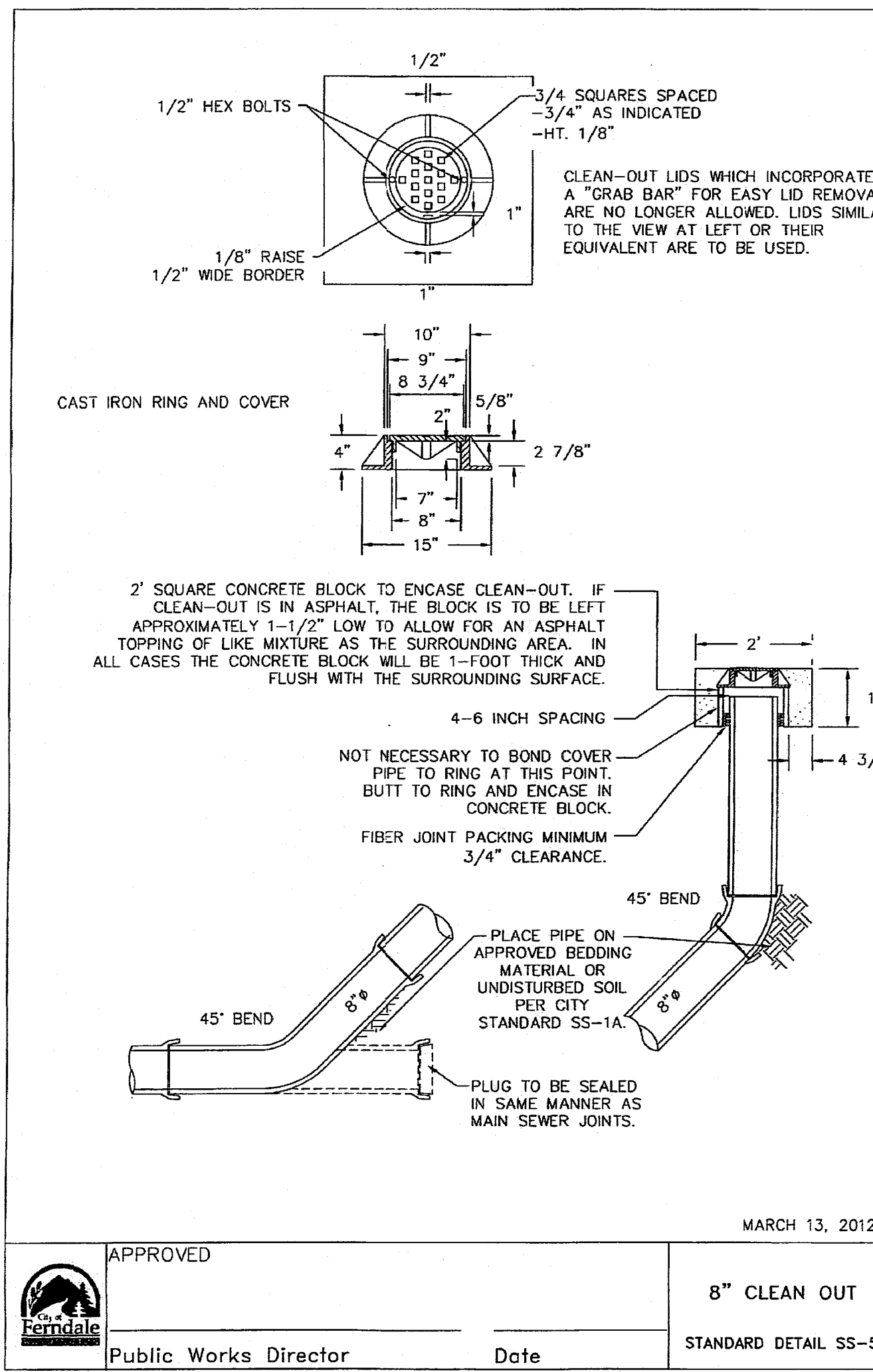
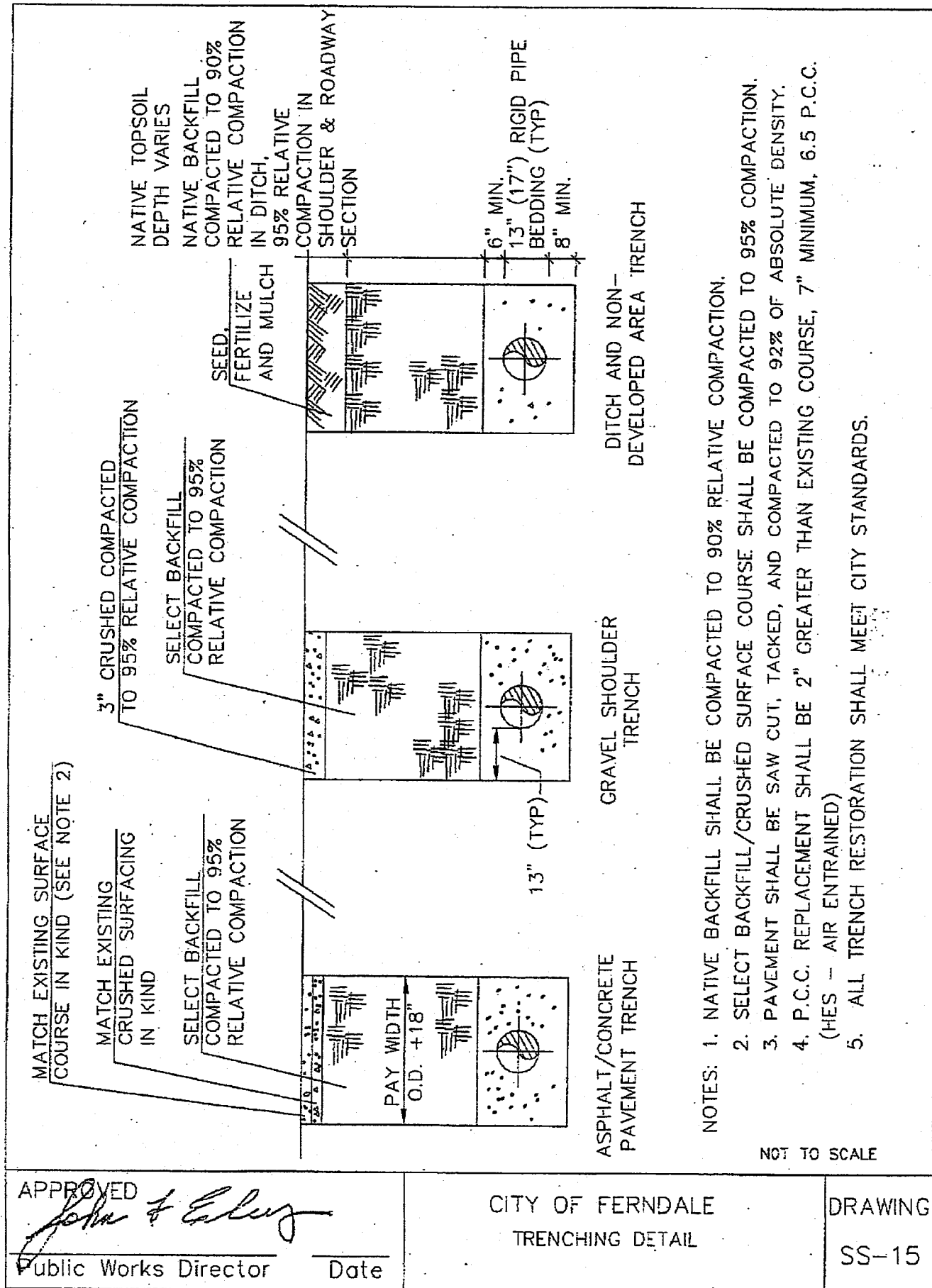


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MANHOLE DIMENSION TABLE

DIAM.	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"

MANHOLE TYPE 1
STANDARD PLAN B-15.20-01
SHEET 1 OF 1 SHEET
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PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERDALE, WA

DRAWING TITLE
SANITARY SEWER DETAILS

DATE: 01/16/2015

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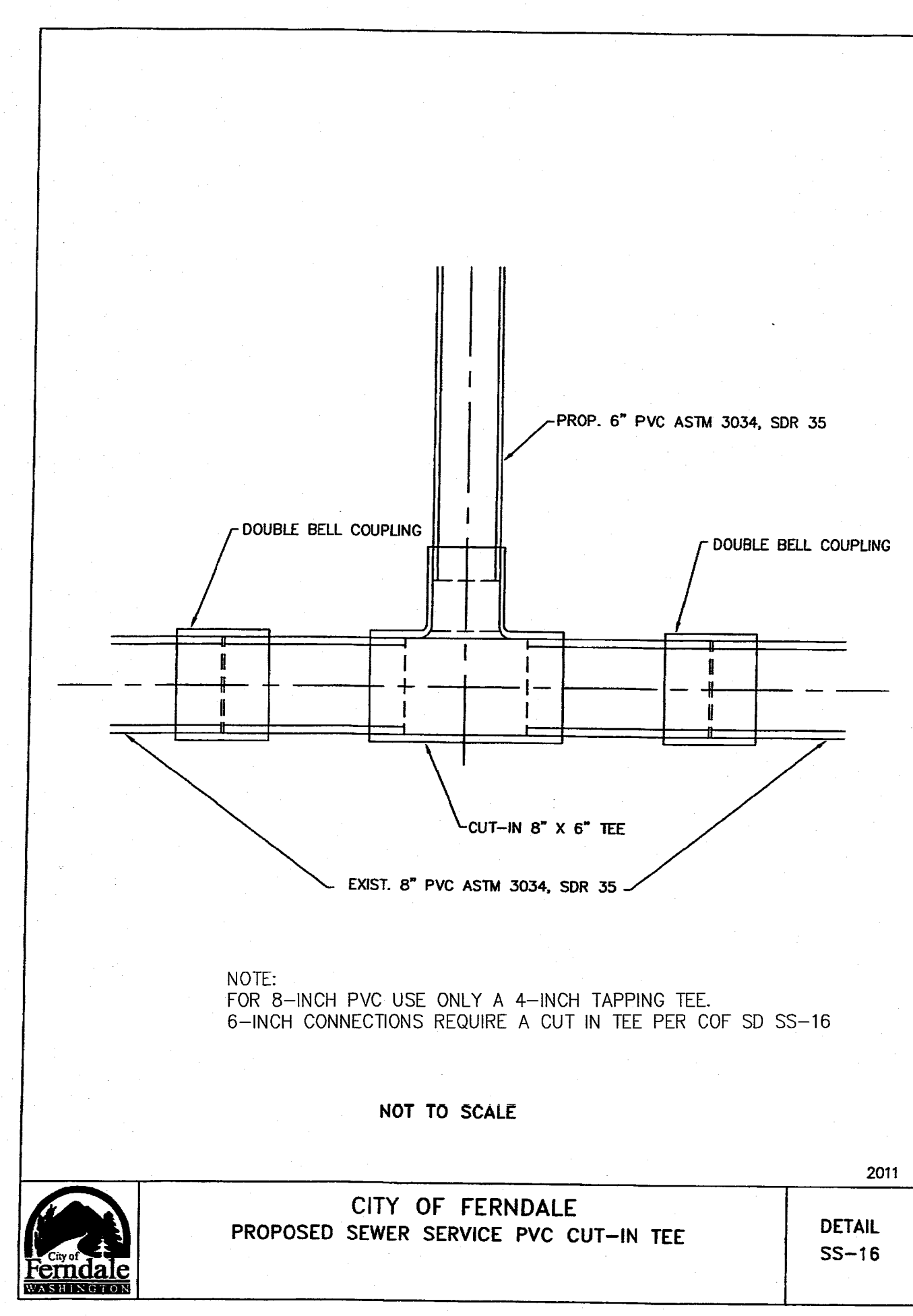
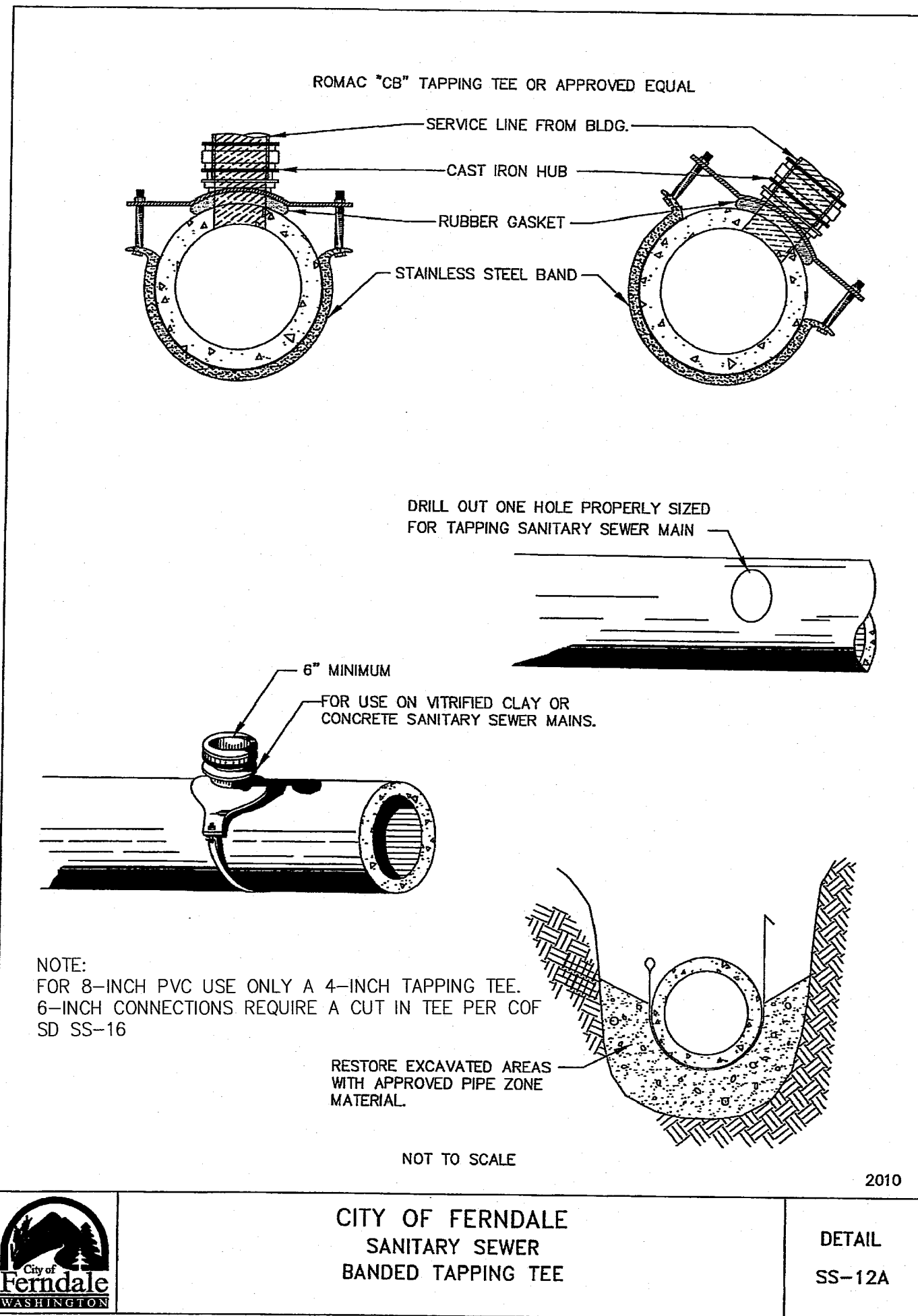
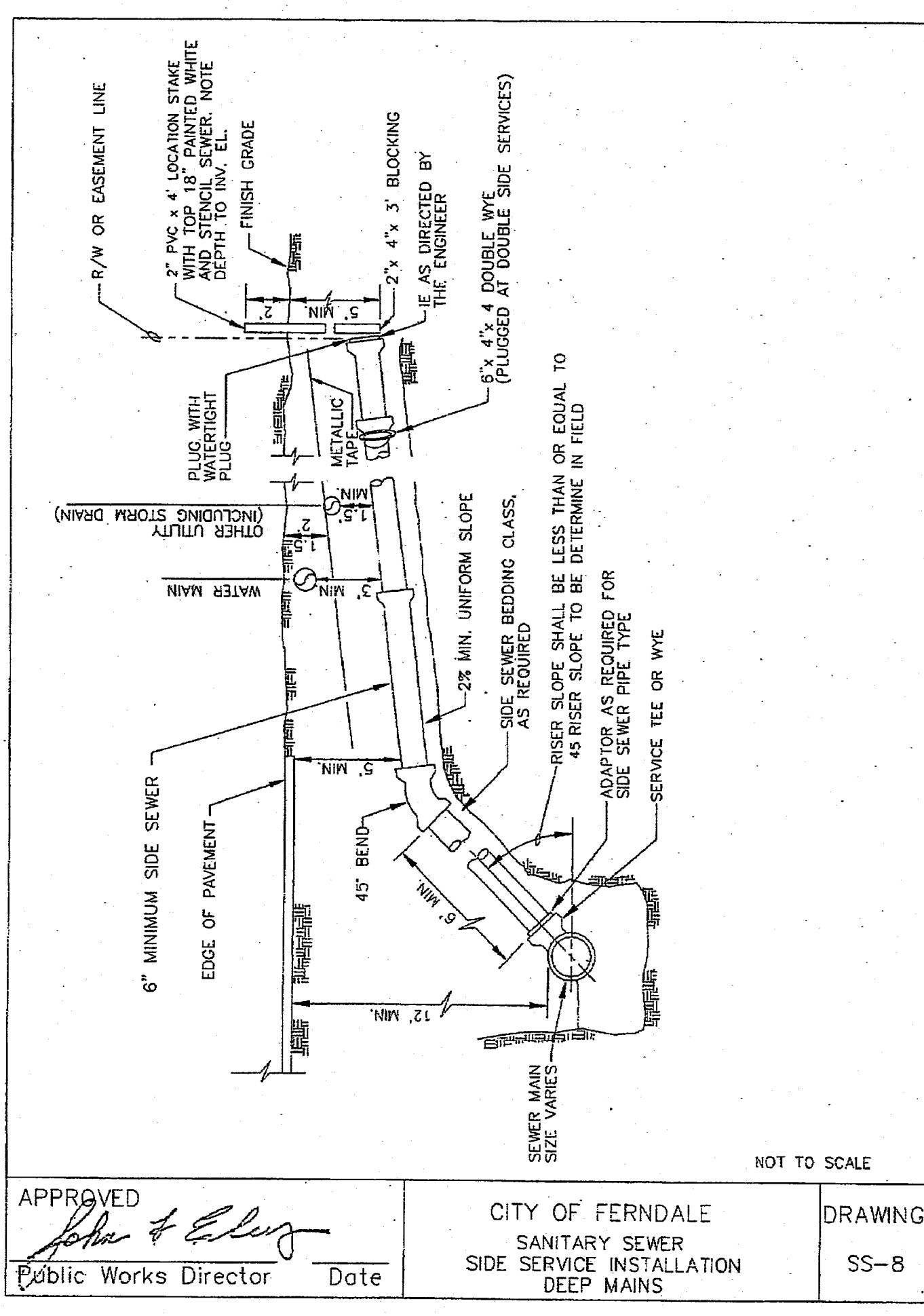
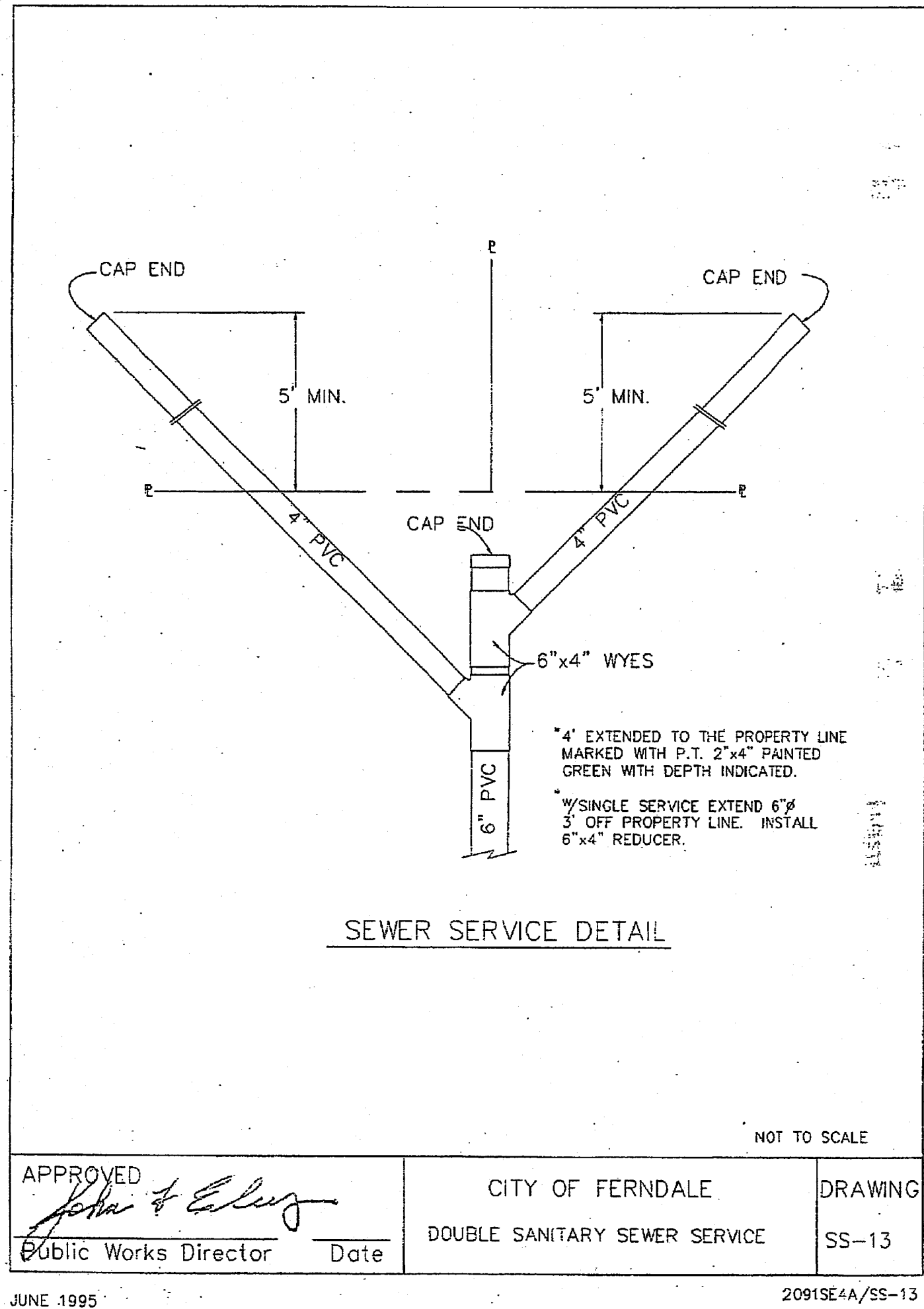
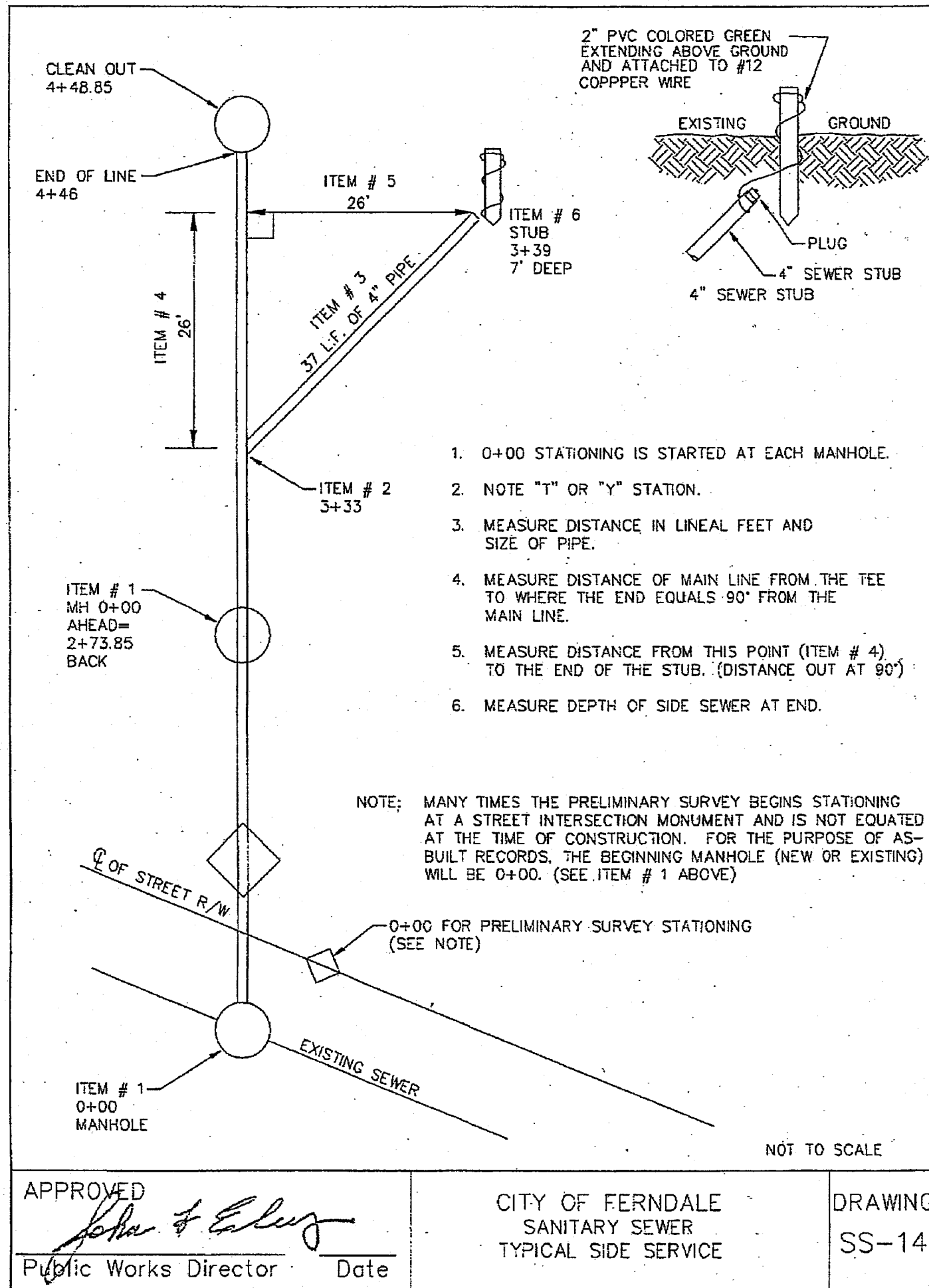
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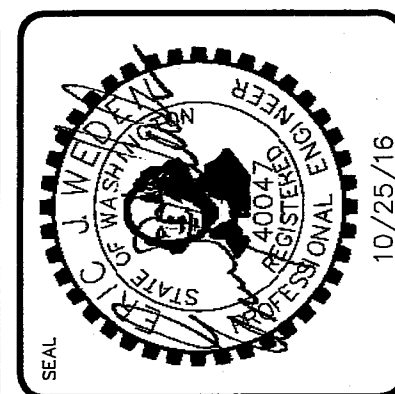


AS-BUILTS

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3	REVISIONS PER CITY COMMENTS	04/14/15
2	REVISED LOT 72-80 & 86-107	03/07/15
1	REVISIONS PER CITY COMMENTS	03/02/15
REVIEWED :	ELW	DRAWN : KLS
CAD FILE :		PROJECT NO. : 1308-02

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERDALE, WA
DRAWING TITLE
SANITARY SEWER DETAILS

DATE : 01/16/2015
DRAWING No.
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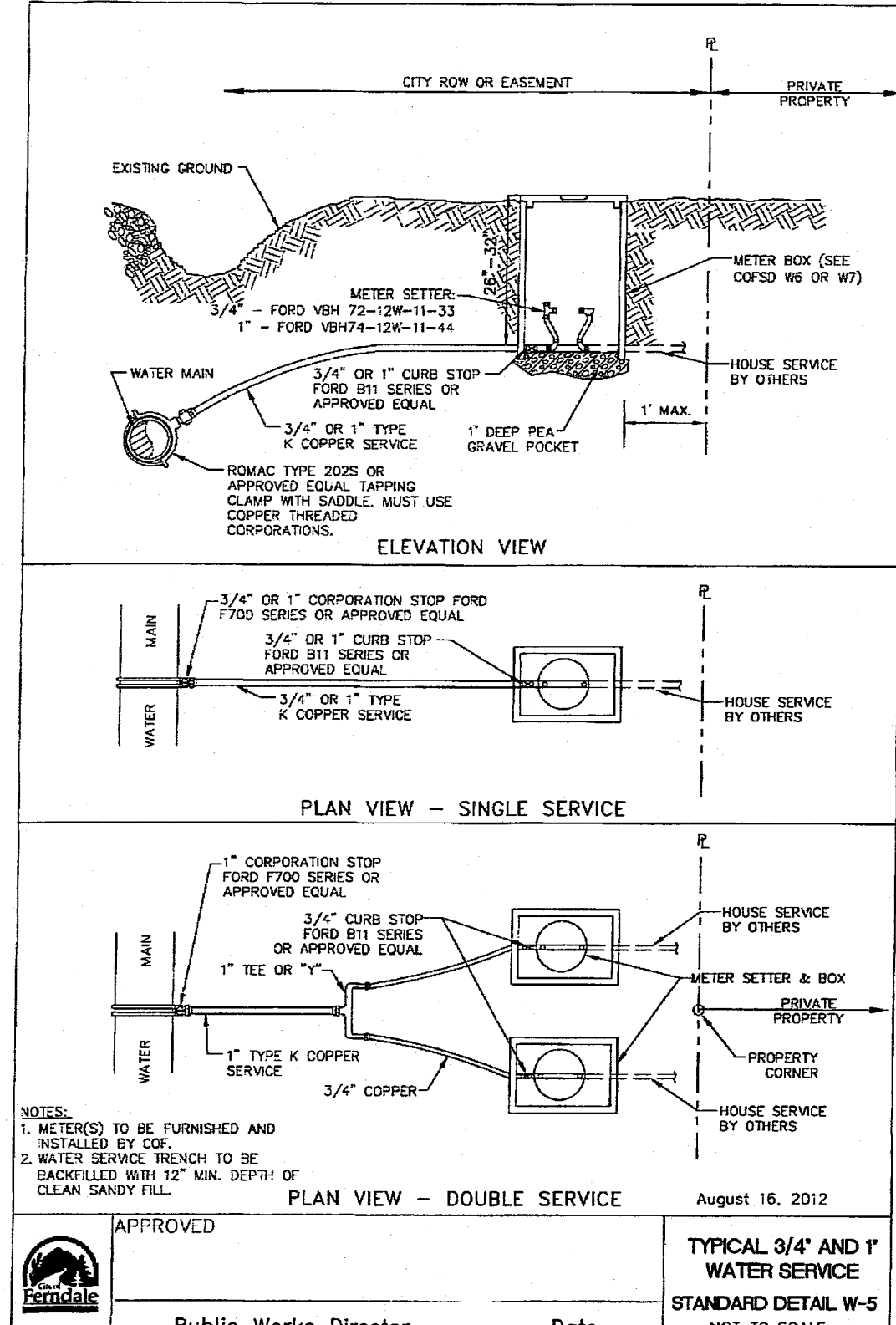
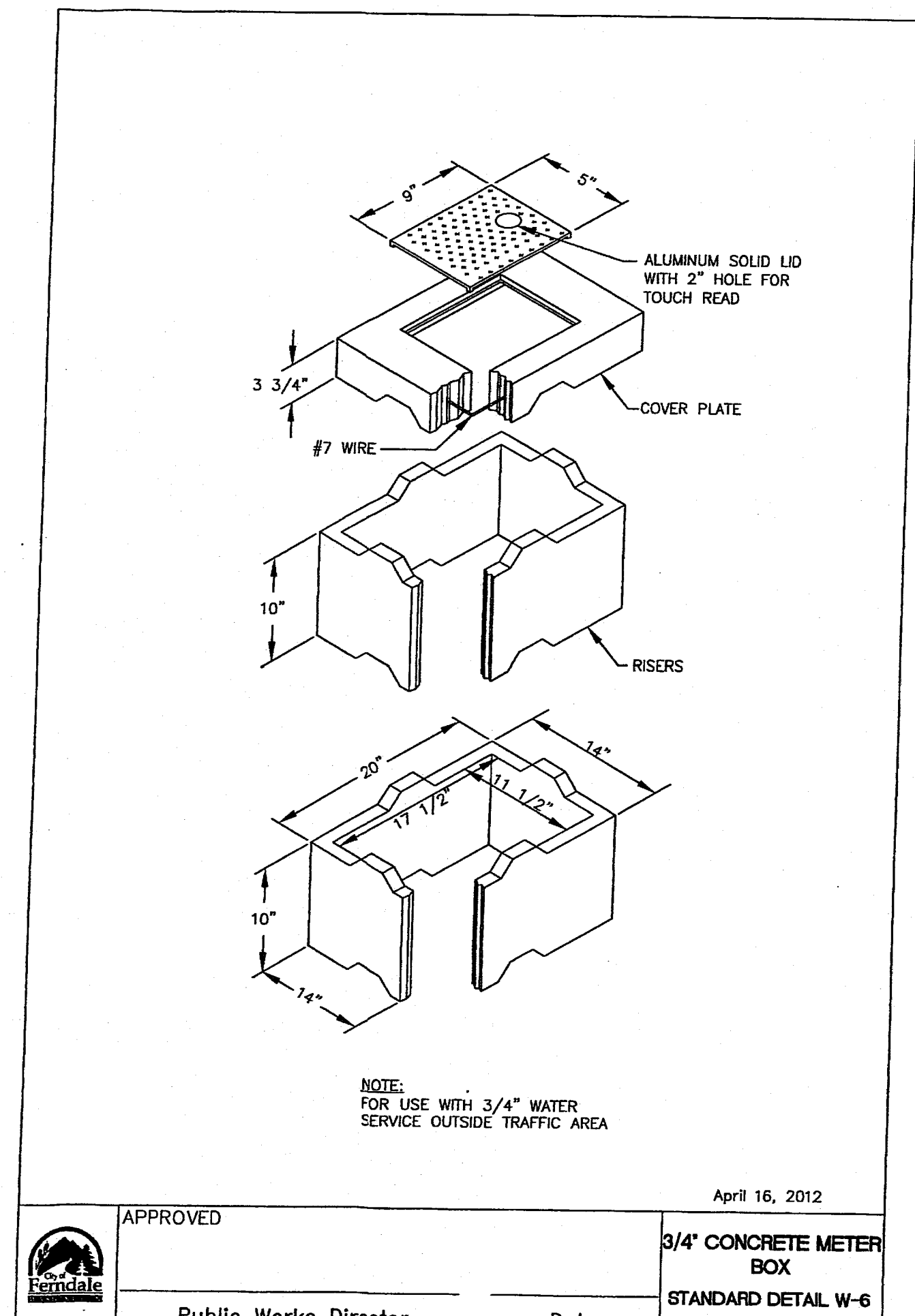
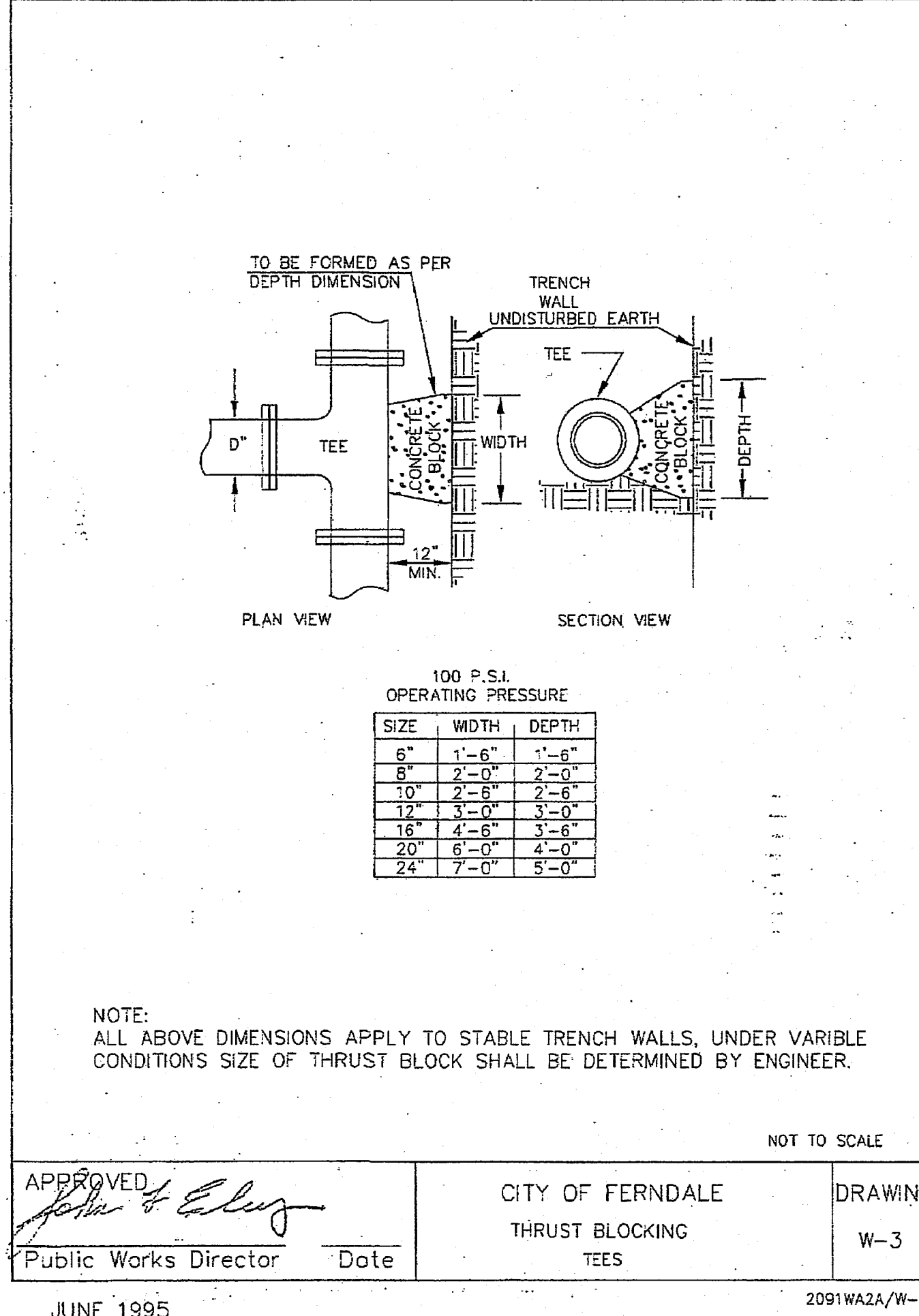
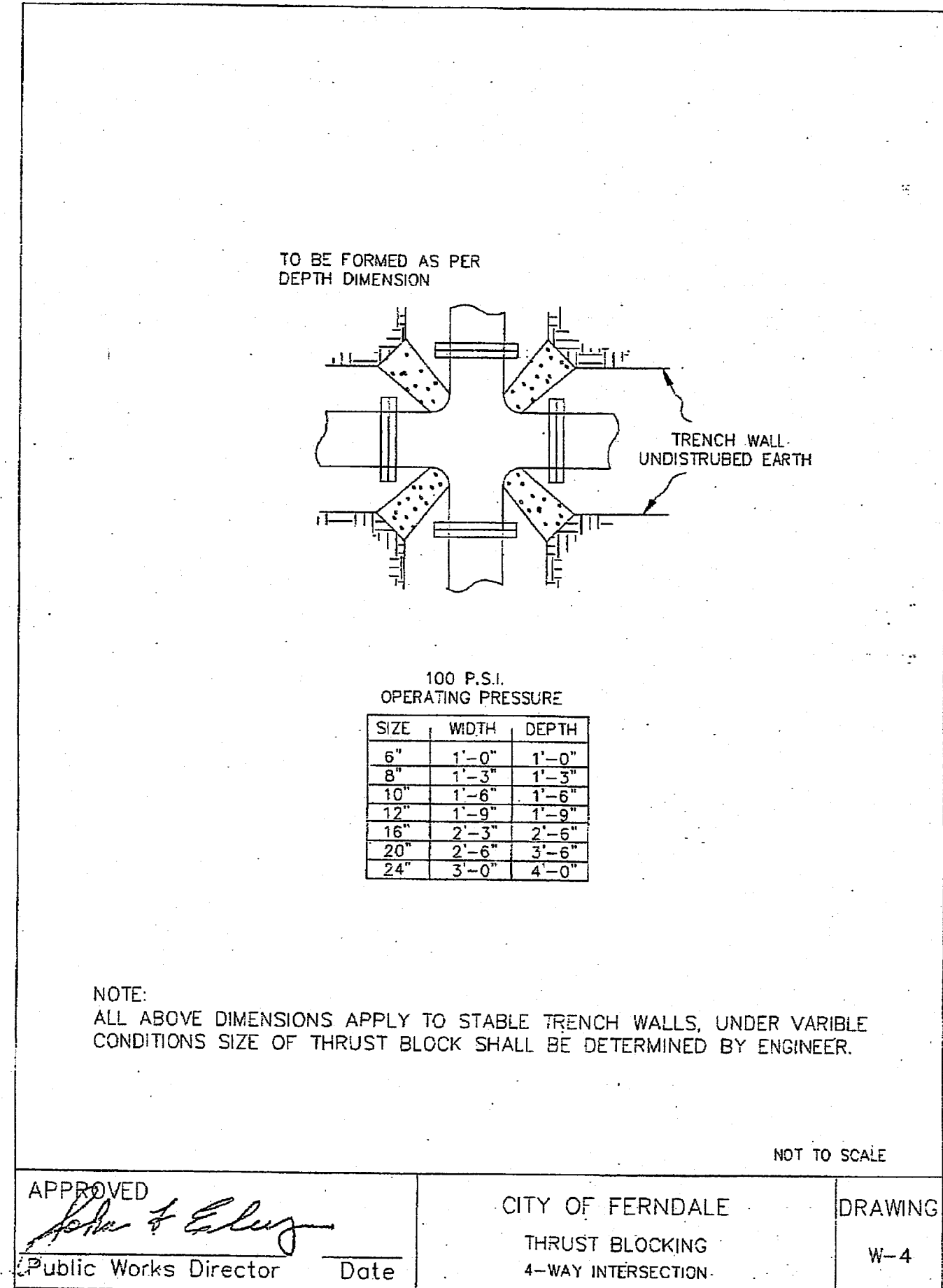
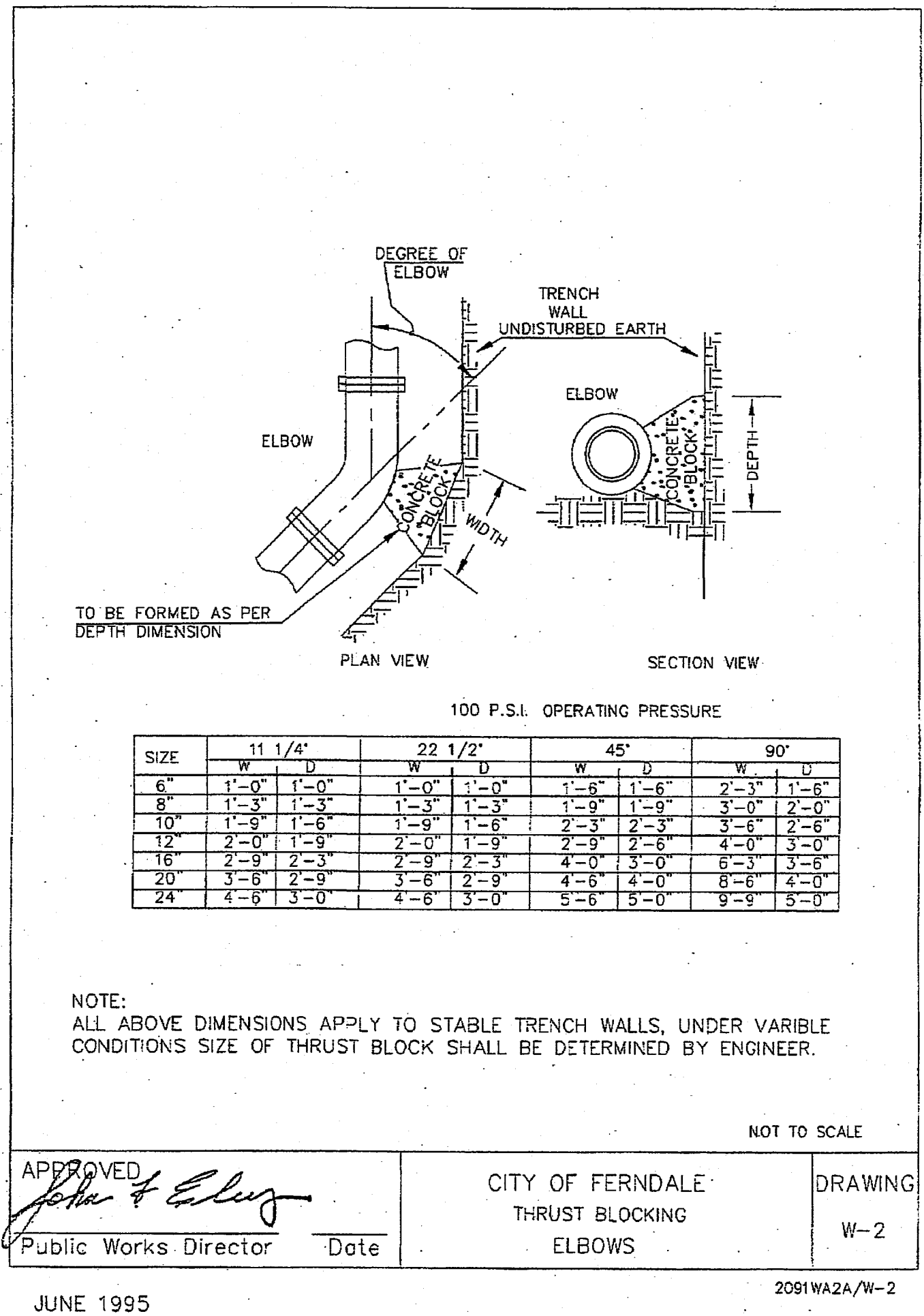
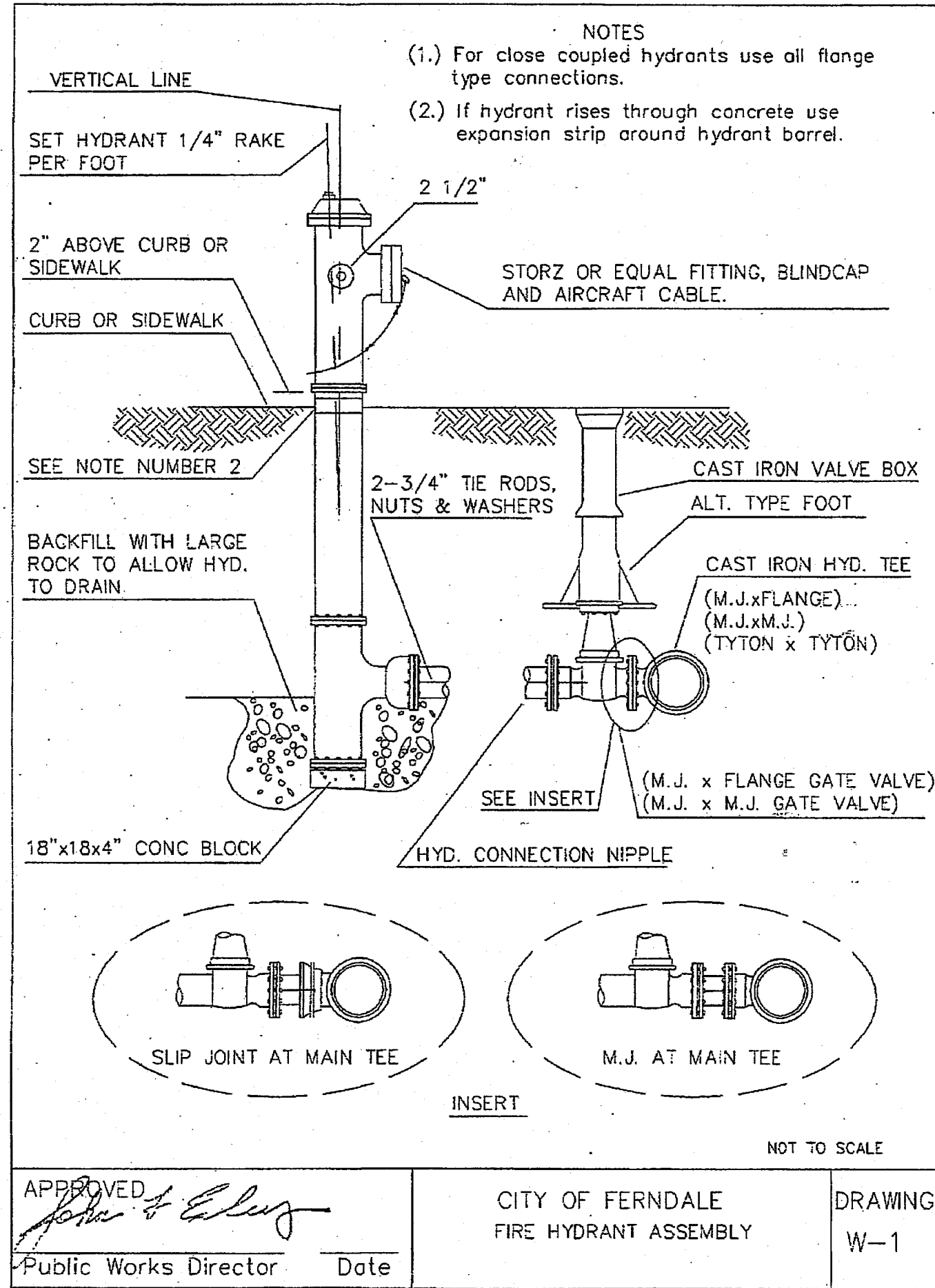


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AS-BUILTS

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDAL, WA

DRAWING TITLE
WATER DETAILS

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AS-BUILT REVISED PER CITY REVIEW 10/13/16

No.	REVISIONS / SUBMISSIONS	DATE
1	AS-BUILT INFORMATION	03/21/16
2	REVISIONS PER CITY COMMENTS	05/28/15
3	REVISIONS PER CITY COMMENTS	04/14/15
4	REVISIONS PER CITY COMMENTS	03/07/15
5	REVISIONS PER CITY COMMENTS	03/02/15
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WEDEN ENGINEERING, LLC
Civil Engineering • Planning • Project Management

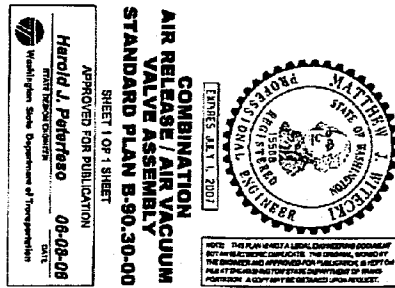
2036 Hubbard Rd., Ferndale, WA 98248
(360) 580-1363 (360) 584-3615 Fax
email: info@wedenengineering.com



APPROVED
DEC 12 2016

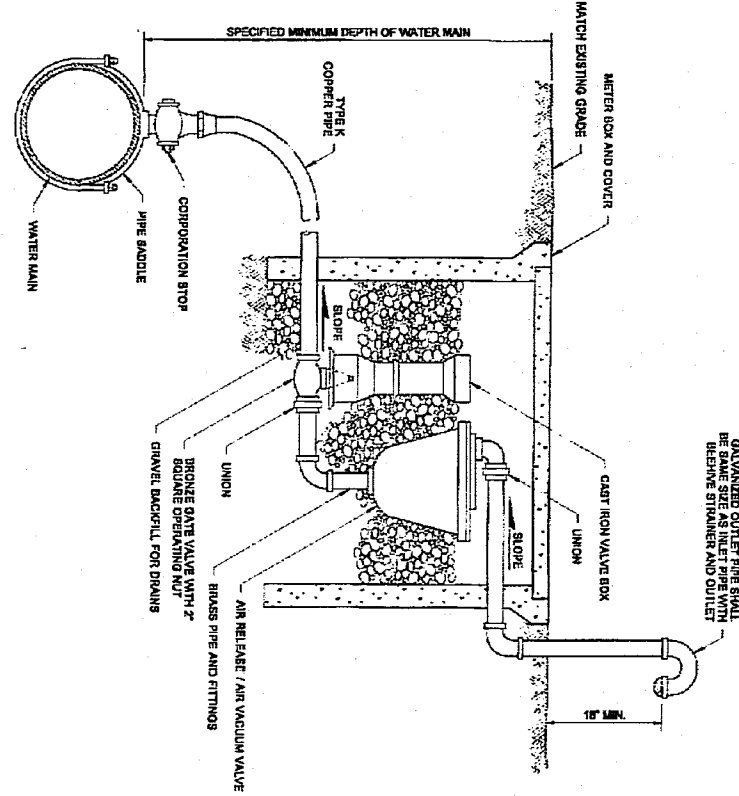
BY
CITY OF FERNDAL

00008.038 12/27/16 SH



AIR QUALITY MONITORING
STANDARD METHOD 504.0-03
DATE: 10/25/16
BY: Michael J. Pugh

- NOTES**
1. This drawing is to be used in conjunction with the approved plans for the project.
 2. Locate all the high point of the site, and the low point.



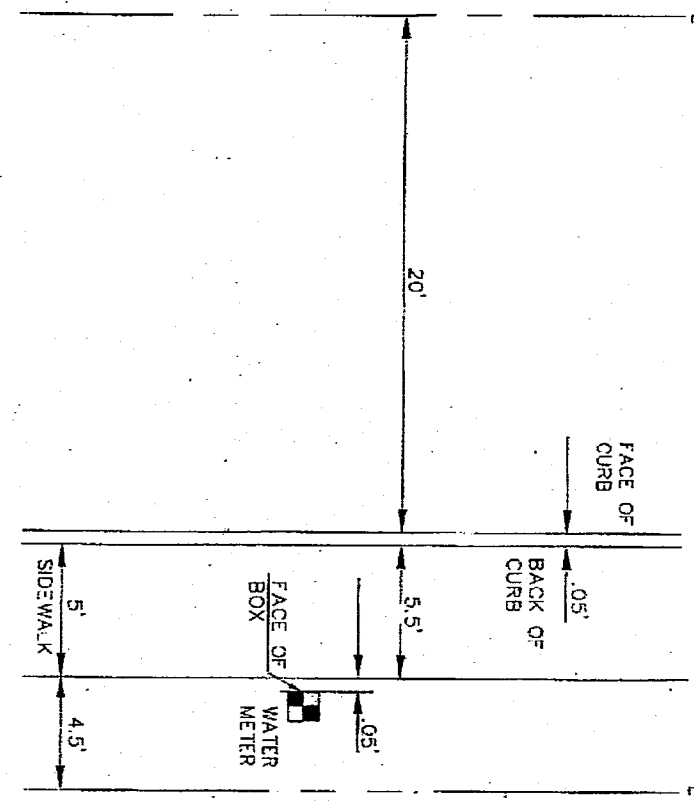
APPROVED
Public Works Director
Date

CITY OF FERNDALE
WATER METER LOCATION DETAIL
W-14

DRAWING
W-14

NO TO SCALE

JUNE 1995



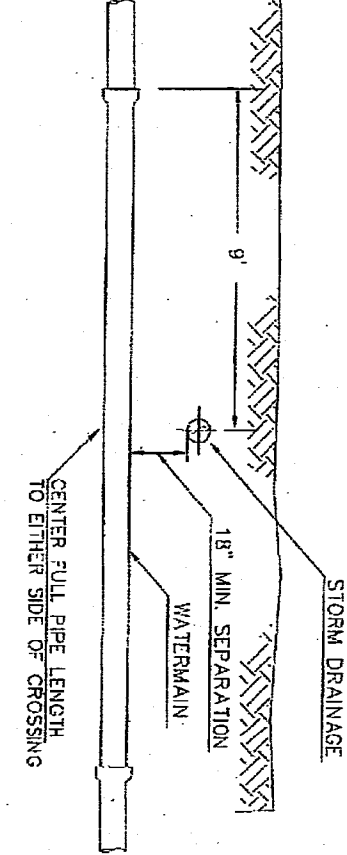
APPROVED
Public Works Director
Date

CITY OF FERNDALE
WATER CROSSING DETAIL
W-12

DRAWING
W-12

NO TO SCALE

JUNE 1995



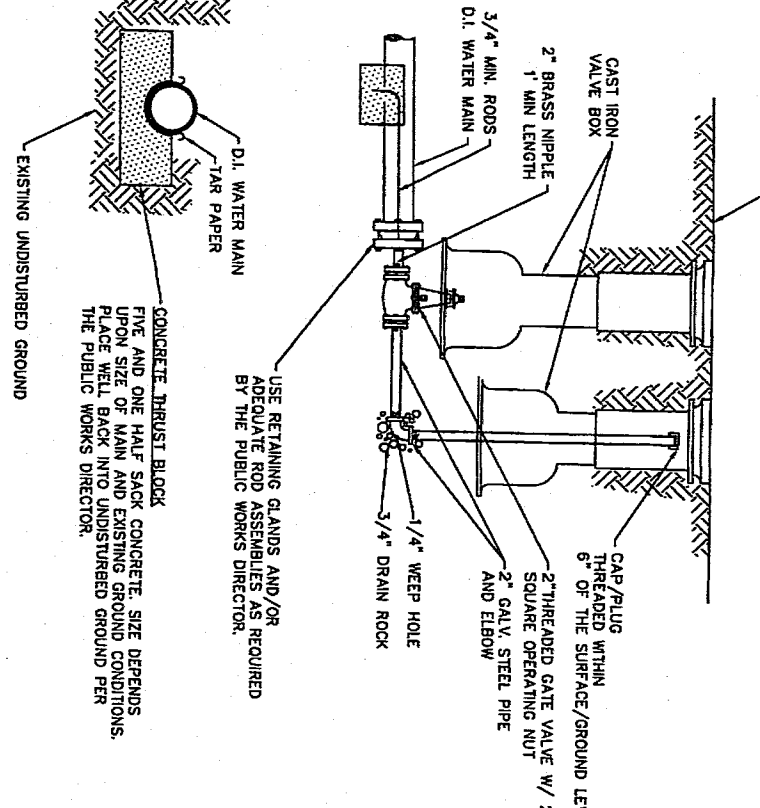
APPROVED
Public Works Director
Date

CITY OF FERNDALE
WATER MAIN EXTENSION
W-10

DRAWING
W-10

NO TO SCALE

JUNE 1995



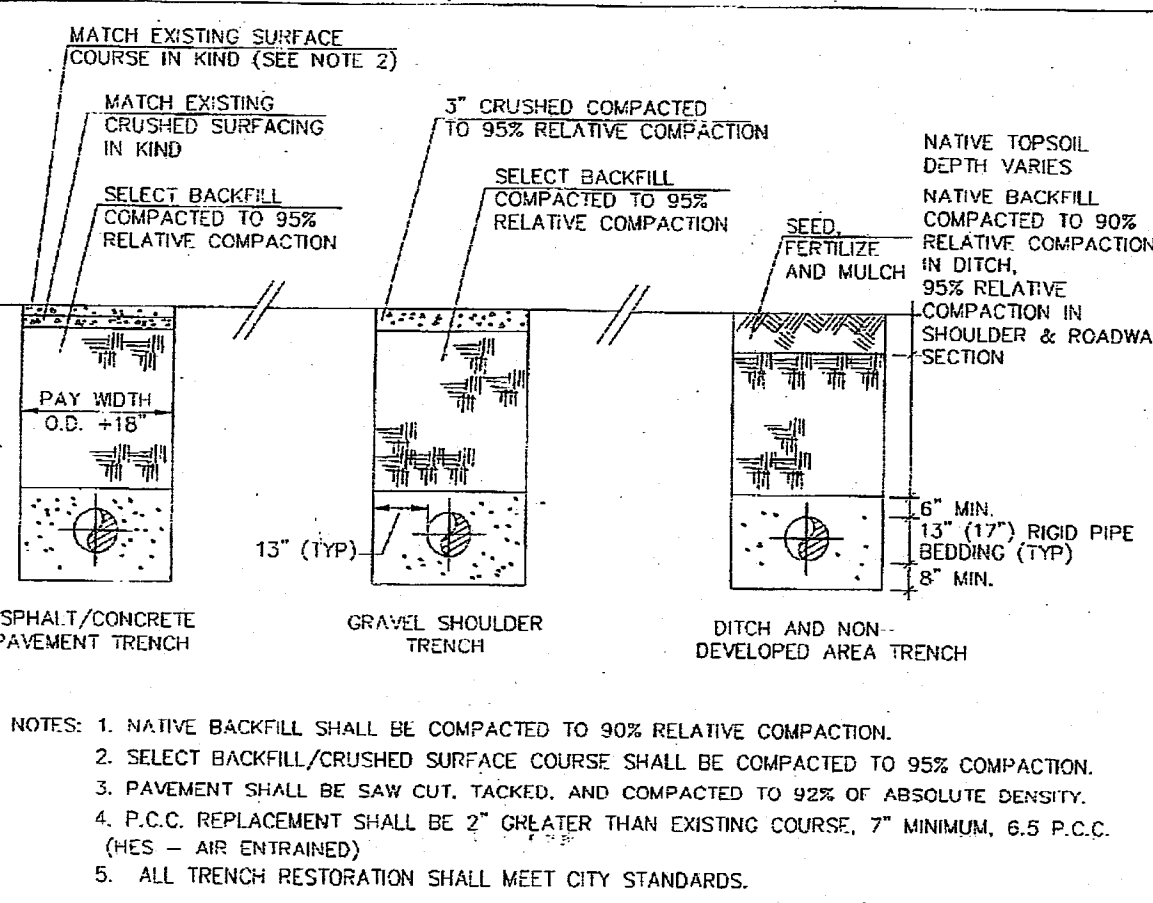
APPROVED
Public Works Director
Date

CITY OF FERNDALE
TRENCHING DETAIL
W-11

DRAWING
W-11

NO TO SCALE

JUNE 1995



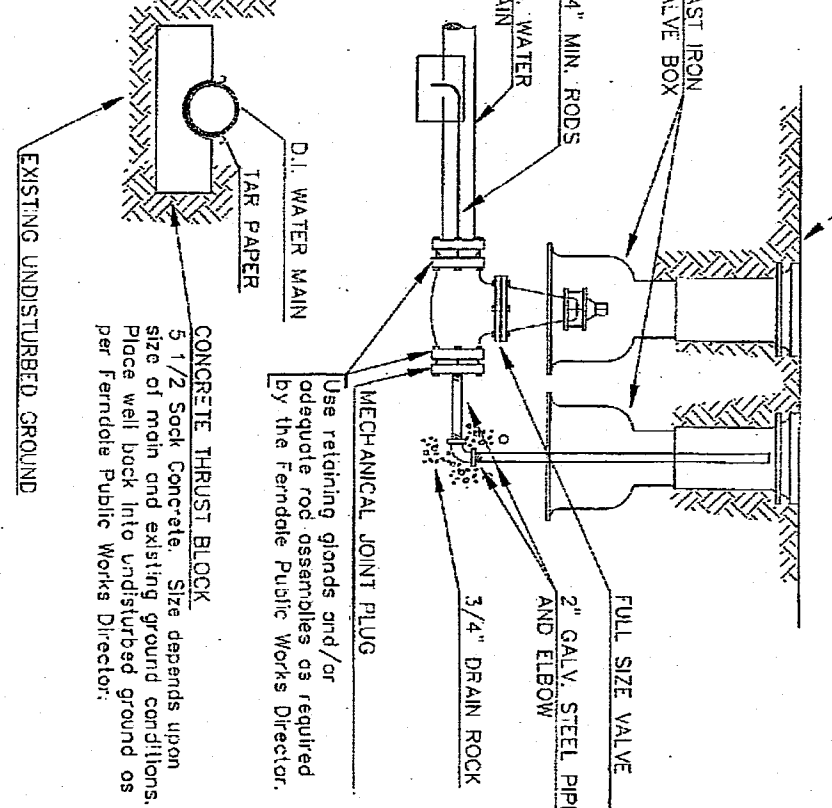
APPROVED
Public Works Director
Date

CITY OF FERNDALE
BLIND-STAY
W-9

DRAWING
W-9

NO TO SCALE

JUNE 1995



AS-BUILTS

REVISIONS/ SUBMISSIONS	DATE
AS-BUILT INFORMATION	02/21/16
4 REVISIONS PER CITY COMMENTS	05/29/15
3 REVISIONS PER CITY COMMENTS	04/14/15
2 REVISED LOT 72-80 & 86-107	03/07/15
1 REVISIONS PER CITY COMMENTS	03/02/15
REVIEWED : E.J.W.	DRAWN : KLS
CAD FILE :	PROJECT NO. : 1308-02

PROJECT TITLE
THE MEADOWS - PHASE II
A PLANNED UNIT DEVELOPMENT
THORNTON ROAD
FERNDAL, WA

DRAWING TITLE
WATER DETAILS

DATE : 01/16/2015
DRAWING No.
39 of 39

APPROVED
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BY
CITY OF FERNDALE

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