



CITY OF MERCER ISLAND

KING COUNTY WASHINGTON



ROADSIDE SHOULDER IMPROVEMENTS WEST MERCER WAY PHASE 3

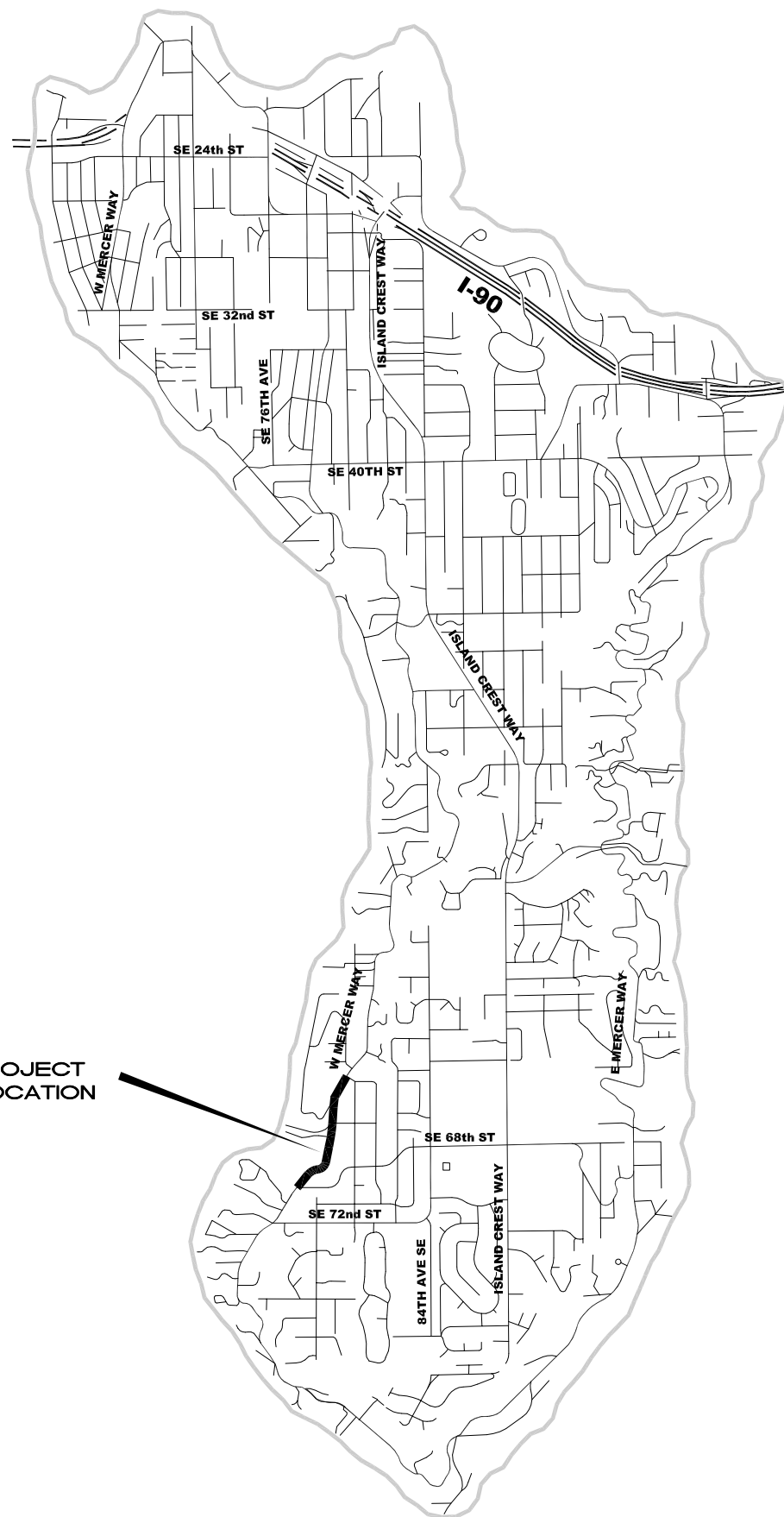
SE 65TH ST TO SE 70TH ST

PROJECT NO. 22-01

BID DOCUMENT

JANUARY 2022

PROJECT LOCATION



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DocuSigned by:

3D4EB62D1931413...
12/21/2021

SURVEY INFORMATION

HORIZONTAL DATUM

HORIZONTAL DATUM: NAD 83/91, WASHINGTON COORDINATE SYSTEM NORTH ZONE. BASED ON CONVENTIONAL TRAVERSE THROUGH CITY OF MERCER ISLAND CONTROL POINTS:

VERTICAL DATUM

VERTICAL DATUM: NAVD 88 BASED ON CONVENTIONAL TRAVERSE THROUGH CITY OF MERCER ISLAND CONTROL POINTS:

DESIGNATION: 4332
 MONUMENT ID: 641Q-4.166
 DESCRIPTION: FOUND TACK IN 1" LEAD DOWN 1.1' IN CONCRETE WITH STANDARD CASE IN THE CENTERLINE OF 81ST AVE SE AT THE INTERSECTION WITH W MERCER WAY.

N=196212.46
 E=1294736.32
 ELEV.=140.59'

DESIGNATION: 4338
 MONUMENT ID: 641Q-4.167

DESCRIPTION: FOUND 3"x3" CONCRETE MONUMENT WITH TACK IN 1" LEAD DOWN 0.6' IN STANDARD CASE IN THE CENTERLINE OF 81ST AVE SE 100 FT NE OF THE INTERSECTION WITH W MERCER WAY.

N=196305.45
 E=1294791.63
 ELEV.=154.53'

DESIGNATION: 1521
 MONUMENT ID: 641Q-35.180

DESCRIPTION: FOUND 1" BRASS DISC IN CONCRETE DOWN 0.7' IN STANDARD CASE IN PRIVATE ROAD 7400 BLOCK OF W MERCER WAY.

N=198453.15
 E=1293136.14
 ELEV.=236.47'

ABBREVIATIONS

AC	ASBESTOS CEMENT	JB	JUNCTION BOX
ASPH	ASPHALT	LF	LINEAR FEET
AVE	AVENUE	LT	LEFT
BM	BENCH MARK	MAX	MAXIMUM
CB	CATCH BASIN	MB	MAILBOX
C&G	CURB & GUTTER	MH	MANHOLE
CL	CENTER LINE	MIC	MONUMENT IN CASE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM
CONC	CONCRETE	MON	MONUMENT
CPE	CORRUGATED POLYETHYLENE	PG	PROPOSED GRADE
CU	COPPER	PL	PLASTIC
CULV	CULVERT	PV	POWER VAULT
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
DIA	DIAMETER	PVT	PRIVATE
DWY	DRIVEWAY	RT	RIGHT
ELEV	ELEVATION	R/W	RIGHT-OF-WAY
EOP	EDGE OF PAVEMENT	SD	STORM DRAIN
EX	EXISTING	SDMH	STORM DRAIN MANHOLE
FH	FIRE HYDRANT	SHT	SHEET
FL	FLOW LINE	SS	SANITARY SEWER
FT	FEET	SSMH	SANITARY SEWER MANHOLE
G	GAS	ST	STREET
GI	GALVANIZED IRON	STA	STATION
GV	GAS VALVE	TEL	TELEPHONE
HMA	HOT MIX ASPHALT	TYP	TYPICAL
IE	INVERT ELEVATION	W	WATER
IN	INCH	WM	WATER METER
		WS	WATER SERVICE
		WV	WATER VALVE

SURVEY LEGEND

	WATER VALVE		RIGHT-OF-WAY LINES FROM GIS DATA
	HYDRANT		LOT LINES FROM GIS DATA
	WATER METER		DITCH LINE
	MANHOLES (SS/SD)		FLOW LINE
	CB		WATER LINE
	POWER/UTILITY POLE		SANITARY SEWER LINE
	GUY ANCHOR		STORM DRAIN LINE
	POWER TRANSFORMER		GAS LINE
	POWER/TELEPHONE VAULT		OVERHEAD UTILITY LINES
	POWER METER		CHANNELIZATION BUTTONS
	TELEPHONE/TV RISER		FOGLINE BUTTONS
	GAS VALVE		
	GAS METER		
	STREET LIGHT		
	LUMINAIRE		
	SPOT ELEVATION		
	SIGN		
	MAILBOX		
	ROCKERY		
	CONIFEROUS TREE		
	DECIDUOUS TREE		
	FOUND CASSED MONUMENT		
	SET MAGNETIC NAIL W/ WASHER		
	SET 5/8" IRON REBAR W/ PLASTIC CAP STAMPED L.S. #		
	UNLESS OTHERWISE STATED.		

DESIGN LEGEND

	HMA FOR PAVING CL 1/2" PG 58H-22 4" COMPACTED DEPTH		CB TYPE 1 OR CONC INLET PER PLAN
	HMA FOR PAVING CL 1/2" PG 58H-22 8" COMPACTED DEPTH		FIRE HYDRANT
	DRIVEWAY		WATER VALVE BOX
	HMA FOR PAVING CL 1/2" PG 58H-22 4" COMPACTED DEPTH		GAS VALVE BOX
	QUARRY SPALL		WATER METER BOX
	SHOULDER RESTORATION		SEWER MH RING AND COVER
	SAWCUT LINE, FULL DEPTH		SIGN
	HMA THICKENED EDGE		SPILLWAY INLET/OUTLET
	APPROX LIMIT OF CONSTRUCTION		FLOW DIRECTION
	STORM DRAIN PIPE		MAIL BOX
	PIPE REMOVAL		MONUMENT CASE
	SWALE FLOW LINE		
	DRIVEWAY FLOW LINE		

GENERAL WATER NOTES

1. TYPICAL TRENCH SECTION PER MI STD DTL W-3 ON SHT 16.
2. SEE WATER SERVICE SCHEDULE ON SHT 15 FOR SERVICE INFORMATION.

GENERAL CHANNELIZATION AND SIGNAGE NOTES

1. REMOVE ALL PAVEMENT MARKINGS WITHIN PROJECT LIMITS UNLESS DIRECTED OTHERWISE BY ENGINEER.
2. ALL PAVEMENT MARKING MATERIAL SHALL CONFORM TO THE "STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION," LATEST EDITION, UNLESS OTHERWISE SPECIFIED BY THE SPECIAL PROVISIONS.
3. PLACE ONE BLUE TYPE 2 RPM AT EACH FIRE HYDRANT.

GENERAL NOTES

1. STATIONS, OFFSETS, AND ELEVATIONS ARE APPROXIMATE AND FOR REFERENCE ONLY. THE PLANS HAVE BEEN SET UP SO SURVEY CONTROL IS NOT REQUIRED. FIELD ADJUSTMENTS DURING CONSTRUCTION SHOULD BE EXPECTED.
2. WMW CL ALIGNMENT MATCHES EX CL CHANNELIZATION.
3. TRAFFIC CONTROL SIGNS SHALL CONFORM TO M.U.T.C.D.
4. UTILITIES THAT ARE NOT ABANDONED SHALL BE SUPPORTED AND MAINTAINED DURING CONSTRUCTION.
5. EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITY ELEVATIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
6. UNLESS NOTED OTHERWISE, UTILITY CROSSING DEPTHS SHOWN IN PROFILE HAVE BEEN ASSUMED. ACTUAL DEPTHS MAY VARY SIGNIFICANTLY AND CONFLICTS SHOULD BE EXPECTED.
 - 6.1. GAS AND WATER MAINS HAVE BEEN ASSUMED TO BE 3' DEEP
 - 6.2. GAS AND WATER SERVICES HAVE BEEN ASSUMED TO BE 1.5' DEEP WHERE CROSSING SWALE FLOW LINES
 - 6.3. SEWER MAINS AND SERVICES HAVE BEEN ASSUMED TO BE BELOW NEW UTILITIES
7. CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDERS FOR UTILITY RELOCATIONS.
8. STATIONS AND OFFSETS OF EXISTING UTILITIES ARE TO CENTER OF UTILITY CASTING OR COVER.
9. ADJUST ALL SURFACE UTILITIES WITHIN PAVING LIMITS TO GRADE UNLESS NOTED OTHERWISE OR DIRECTED BY ENGINEER.
10. DRIVEWAY ACCESS MUST BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE AGREED TO BY THE PROPERTY OWNER.
11. CALL ONE CALL 48 HOURS BEFORE YOU DIG FOR UTILITY LOCATES: 1-800-424-5555 OR 811
12. CITY OF MERCER ISLAND SHALL FURNISH NEW MANHOLE RING AND COVERS, WATER VALVE BOXES, WATER METER BOXES, AND WATER METERS.
13. CONTRACTOR SHALL FURNISH NEW CATCH BASIN FRAMES, GRATES, AND SOLID LIDS.
14. WHERE A NEW PIPE CLEARS AN EXISTING OR NEW UTILITY BY 6 INCHES OR LESS, POLYETHYLENE PLASTIC FOAM SHALL BE PLACED AS A CUSHION BETWEEN THE UTILITIES.
15. SEAL ALL NEW HMA-TO-EX ASPH PAVING JOINTS WITH LIQUID ASPHALT AND COAT WITH SAND AFTER COMPLETION OF HMA PAVING.
16. STORM DRAINAGE AND SANITARY SEWER STRUCTURES SHALL BE CLEANED AT PROJECT COMPLETION.

GENERAL TESC NOTES

1. CONTRACTOR SHALL INSTALL INLET PROTECTION PER DTL 1/18 AT ALL EXISTING AND NEW CATCH BASINS WITHIN THE PROJECT LIMITS AS WELL AS DOWNSTREAM OF THE WORK AREA, AS DIRECTED BY THE ENGINEER.
2. THE TESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
3. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.).

GENERAL SITE PREPARATION NOTES

1. REMOVAL LIMITS ARE APPROXIMATE. LIMITS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. TREES WITHIN THE CLEARING LIMITS SHALL BE REMOVED AFTER APPROVAL BY THE ENGINEER.
2. PROTECT ALL PLANT MATERIAL OUTSIDE OF SURFACE REMOVAL LIMITS.
3. PROTECT ALL EXISTING IRRIGATION SYSTEMS OUTSIDE OF SURFACE REMOVAL LIMITS.
4. SEE CHANNELIZATION AND SIGNING PLANS FOR SIGN REMOVAL AND RELOCATION.

GENERAL STORM DRAINAGE NOTES

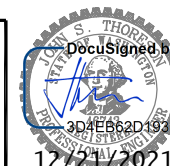
1. STRUCTURE AND PIPE INFORMATION SHOWN ON THE PLANS ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS DIRECTED BY THE ENGINEER FOR FIELD CONDITIONS AND CONFLICTS DISCOVERED DURING CONSTRUCTION.
2. RIM ELEVATIONS ARE FOR BIDDING PURPOSES. CONTRACTOR SHALL FIELD ADJUST RIM ELEVATIONS TO ENSURE PROPER DRAINAGE.
3. TYPICAL TRENCH SECTION PER MI STD DTL W-3 ON SHT 16.
4. CONCRETE INLET MAY BE SUBSTITUTED FOR A CATCH BASIN TYPE 1 TO AVOID CONFLICTS.
5. NEW TYPE 1 CATCH BASINS SHALL HAVE AN 18"x24" FRAME AND VANED GRATE UNLESS NOTED OTHERWISE.

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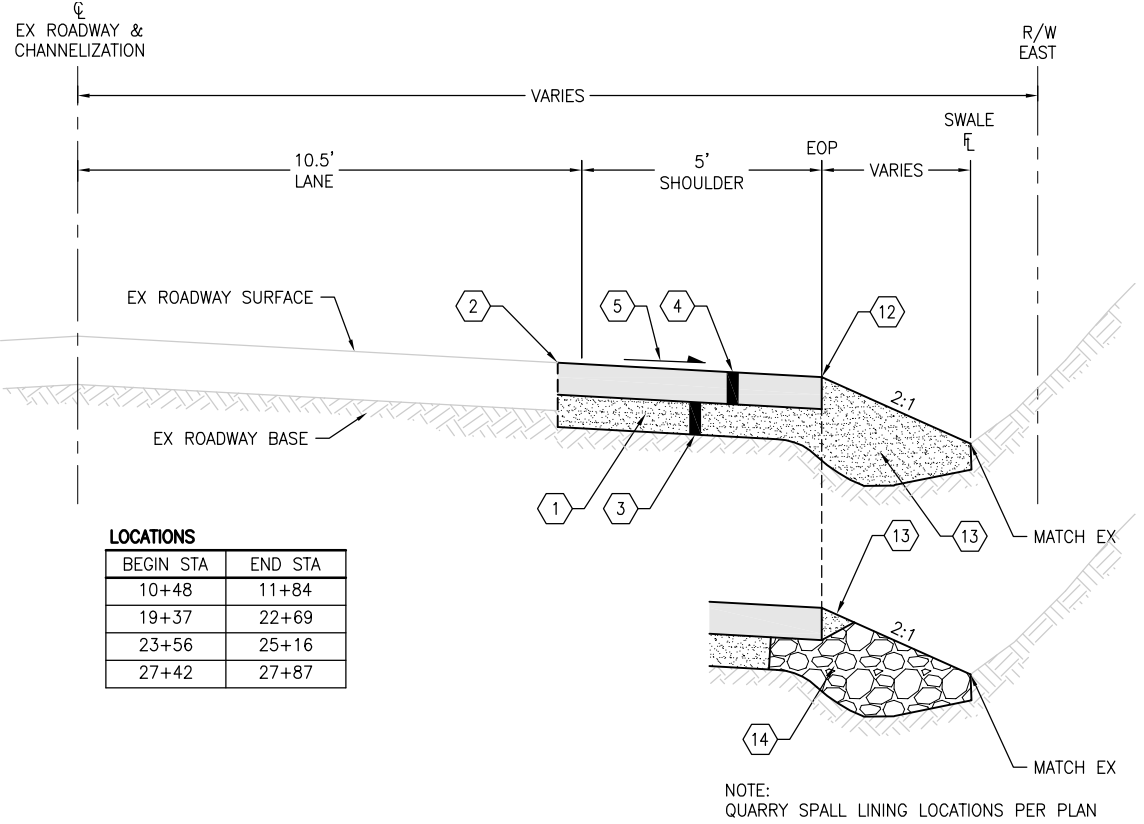
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
NOTES AND LEGENDS

PROJECT NO.	22-01
SCALE	NONE
SHEET	2 OF 19

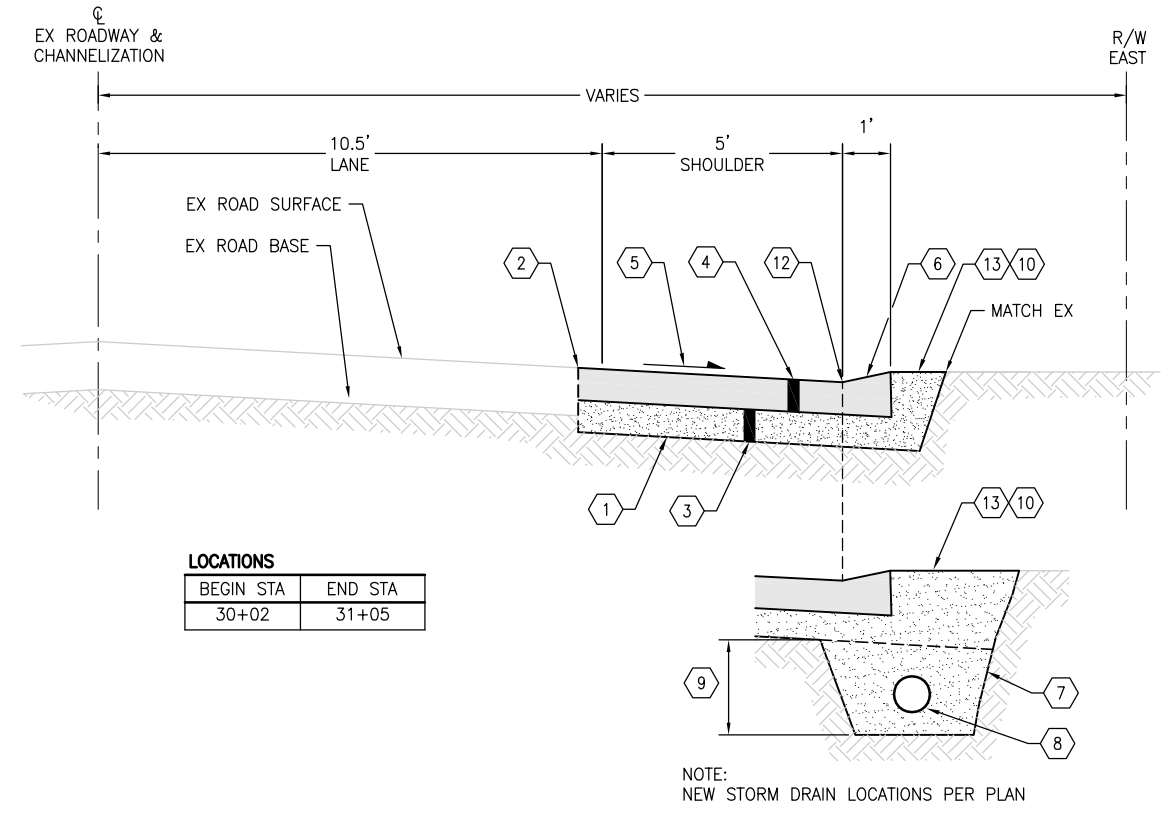


LOCATIONS

BEGIN STA	END STA
10+48	11+84
19+37	22+69
23+56	25+16
27+42	27+87

NOTE:
QUARRY SPALL LINING LOCATIONS PER PLAN

TYPICAL SECTION A

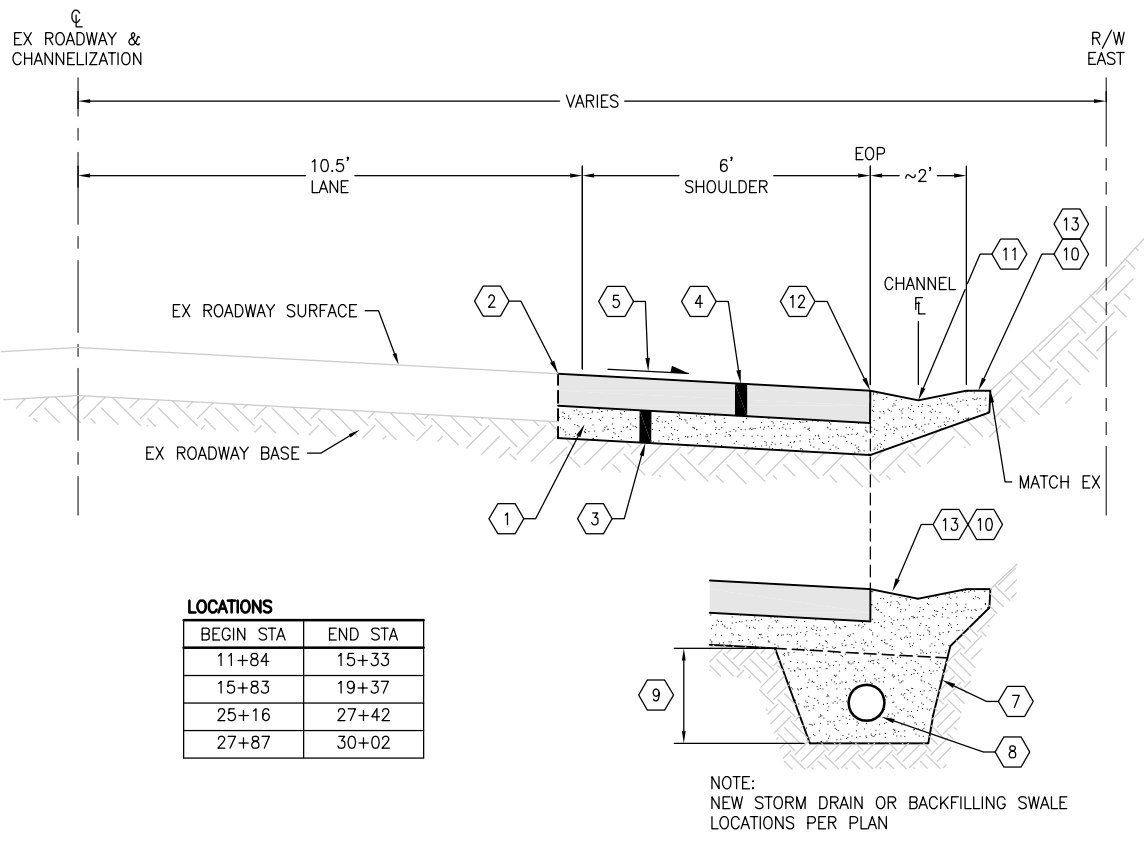


LOCATIONS

BEGIN STA	END STA
30+02	31+05

NOTE:
NEW STORM DRAIN LOCATIONS PER PLAN

TYPICAL SECTION B

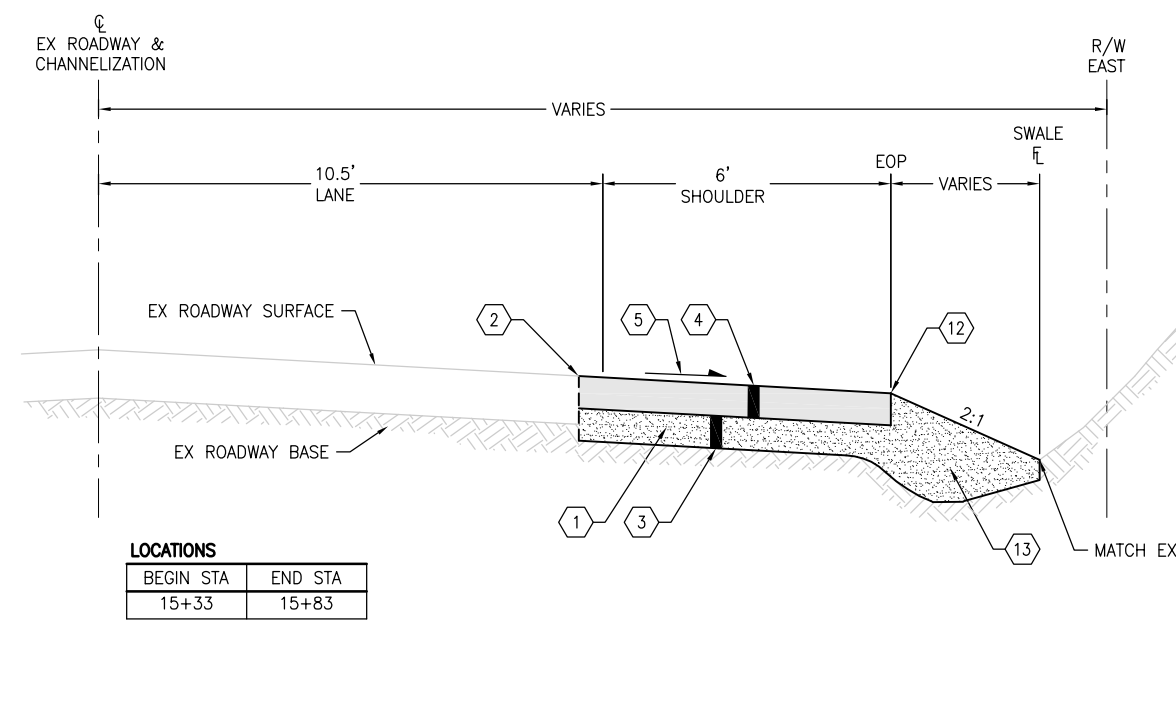


LOCATIONS

BEGIN STA	END STA
11+84	15+33
15+83	19+37
25+16	27+42
27+87	30+02

NOTE:
NEW STORM DRAIN OR BACKFILLING SWALE
LOCATIONS PER PLAN

TYPICAL SECTION C



LOCATIONS

BEGIN STA	END STA
15+33	15+83

NTS

TYPICAL SECTION D

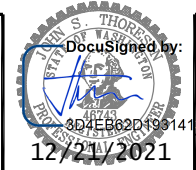
SECTION NOTES

- 1 CLEAR AND GRUB TO REMOVE ALL TOPSOIL AND VEGETATION AND EXCAVATE TO FIRM NATIVE SOILS
- 2 SAWCUT, FULL DEPTH, 1'(TYP) FROM EOP OR AS FIELD MARKED
- 3 4" CSTC (OR CSBC). PLACE AND COMPACT ADDITIONAL CSTC (OR CSBC) AS NECESSARY TO ESTABLISH SUBGRADE
- 4 4" HMA FOR PAVING CL 1/2" PG 58H-22 PLACED AND COMPACTED IN 2" MAX LIFTS
- 5 MATCH EX ROADWAY CROSS-SLOPE UNLESS NOTED OTHERWISE
- 6 HMA THICKENED EDGE PER DTL 7/18
- 7 CLEAR AND GRUB SWALE FOR STORM DRAIN INSTALLATION OR BACKFILLING PER PLANS
- 8 NEW STORM DRAIN SIZE, MATERIAL, MIN SLOPE, AND MIN COVER PER PLAN OR AS FIELD DETERMINED WITH ENGINEER
- 9 TYPICAL TRENCH SECTION PER MI STD PLAN W-3 ON SHT 16. BACKFILL SWALE WITH CSTC (OR CSBC)
- 10 EDGE RESTORATION PER DTL 3/19
- 11 SMALL CHANNEL BEHIND EOP SHAPED TO ENSURE WATER FLOWS OFF NEW HMA SHOULDER TO CSTC SHOULDER
- 12 PROFILE POINT. SEE SHEETS 4-10 FOR ELEVATIONS
- 13 COMPACTED CSTC (OR CSBC)
- 14 QUARRY SPALLS



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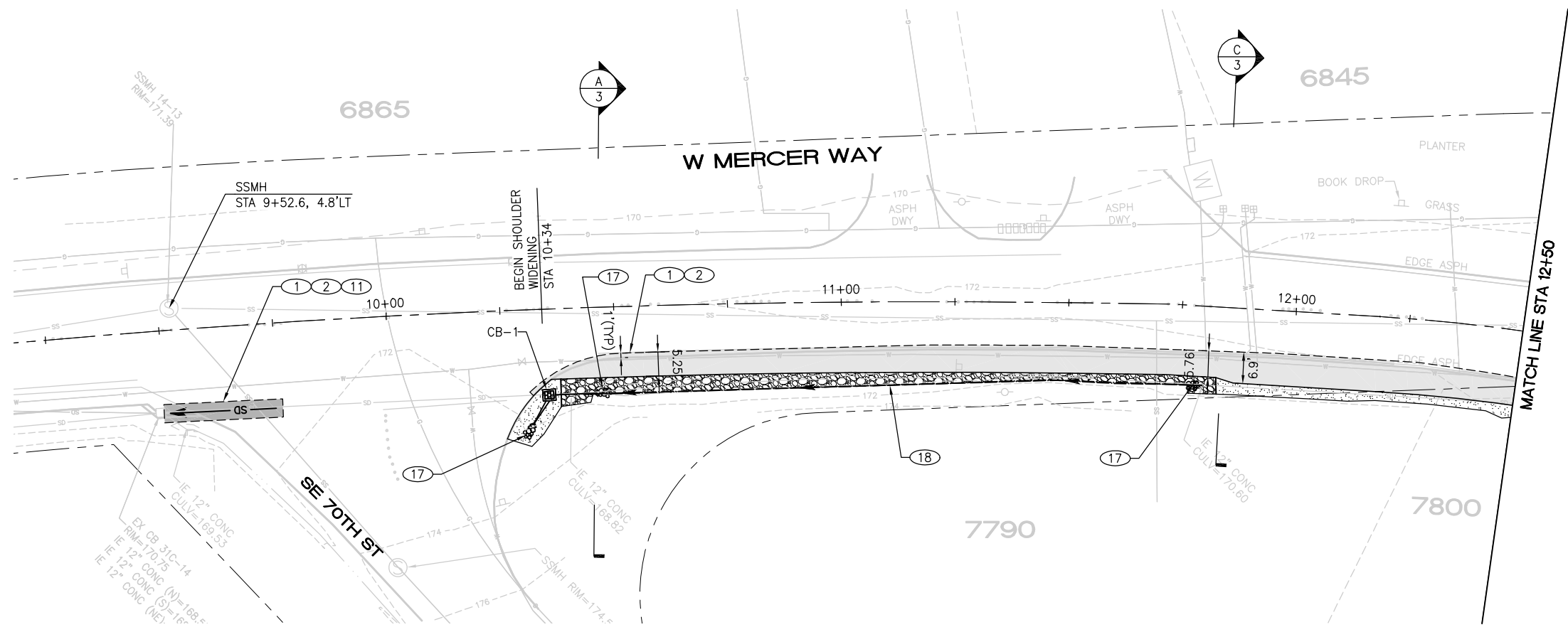


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**CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
TYPICAL SECTIONS**

PROJECT NO.	22-01
SCALE	NONE
SHEET	3 OF 19

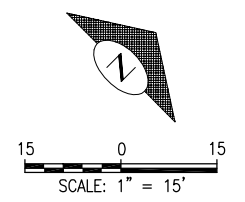
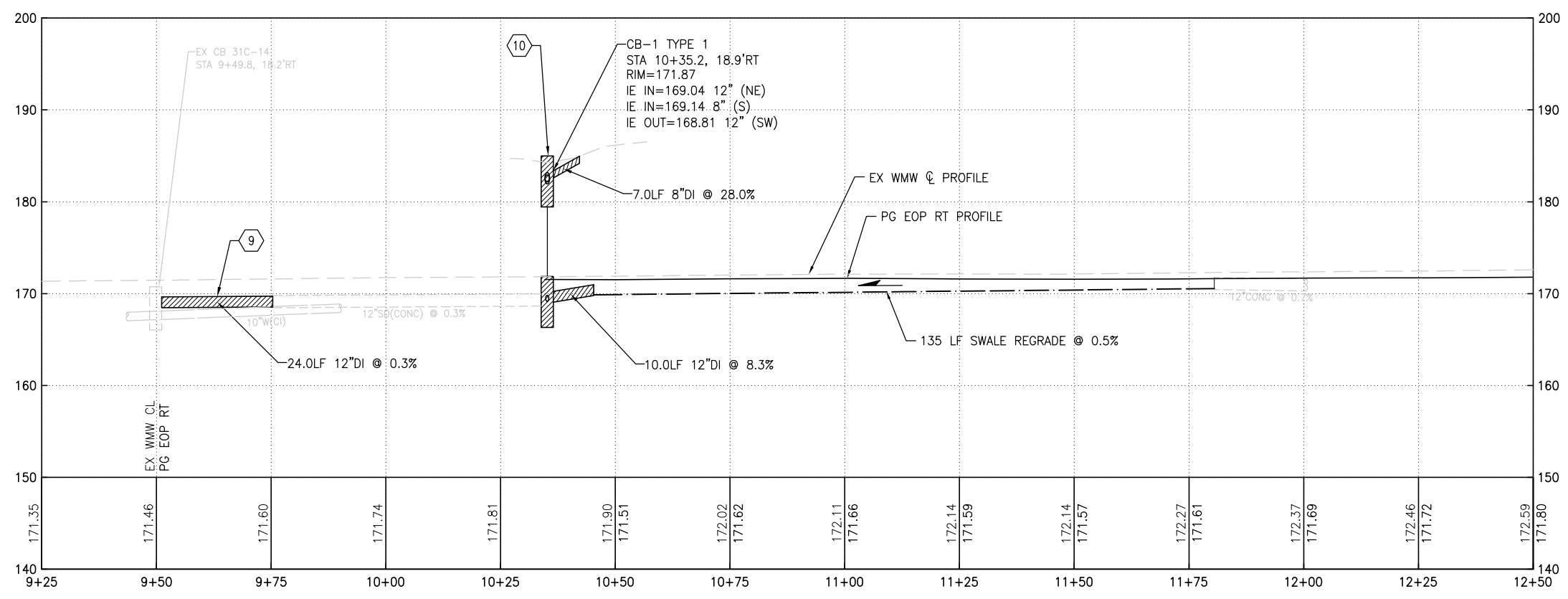
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CONSTRUCTION NOTES

- SCHEDULE A - SHOULDER WIDENING**
- ① SAWCUT, FULL DEPTH, 1'(TYP) FROM EDGE OF ASPH OR AS FIELD MARKED
 - ② REMOVE ASPH PAVEMENT
 - ⑪ REPAIR PAVEMENT AS FIELD MARKED PER DTL 4/18
 - ⑰ CONSTRUCT CULVERT INLET-OUTLET PER DTL 2/18
 - ⑱ CONSTRUCT NEW QUARRY SPALL SWALE PER TYPICAL SECTION AND REGRADE EX FLOW LINE FOR POSITIVE DRAINAGE

- SCHEDULE B - DRAINAGE IMPROVEMENTS**
- ⑨ REPLACE EX 12" CONC PIPE W/ APPROX 24 LF OF 12" DI PIPE NORTH OF EX CB 31C-14 TO REPAIR OFFSET JOINTS 3', 17', AND 21' NORTH OF CB. CONNECT TO CONC PIPE W/ FERNCO
 - ⑩ REMOVE APPROX 3 LF OF CONC PIPE AND INSTALL NEW CB ON END OF PIPE. INSTALL APPROX 10 LF OF 12" DI PIPE AND 7 LF OF 8" DI PIPE FROM NEW CB. FIELD DETERMINE PIPE SLOPES AND IES FOR POSITIVE DRAINAGE AS DIRECTED BY ENGINEER



CM DESIGN GROUP
 1318 East Pike Street
 Seattle, WA 98122
 206-659-0612

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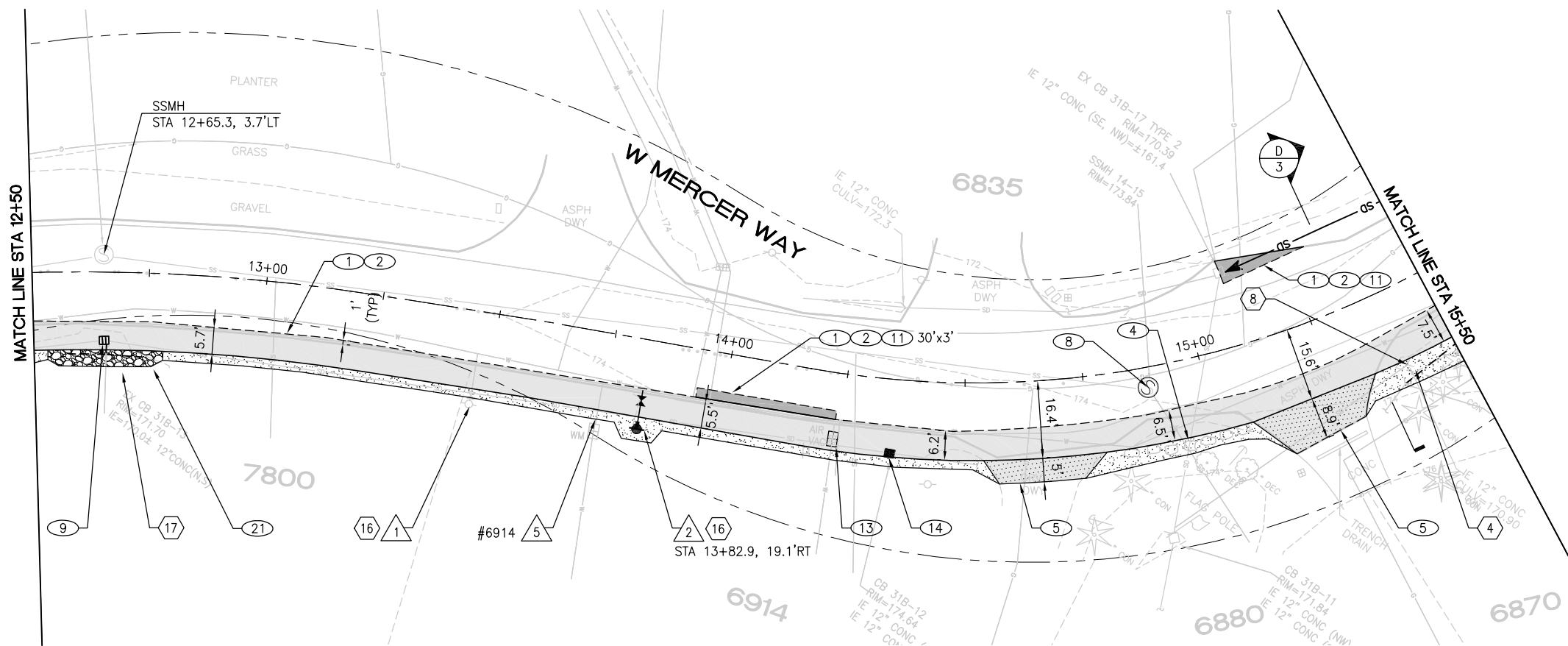


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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
SHOULDER WIDENING AND
UTILITY IMPROVEMENTS

PROJECT NO.	22-01
SCALE H:	1"=15'
SCALE V:	1"=7.5'
SHEET	4 OF 19

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CONSTRUCTION NOTES

SCHEDULE A - SHOULDER WIDENING

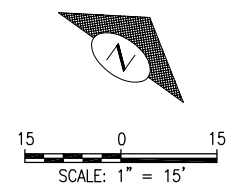
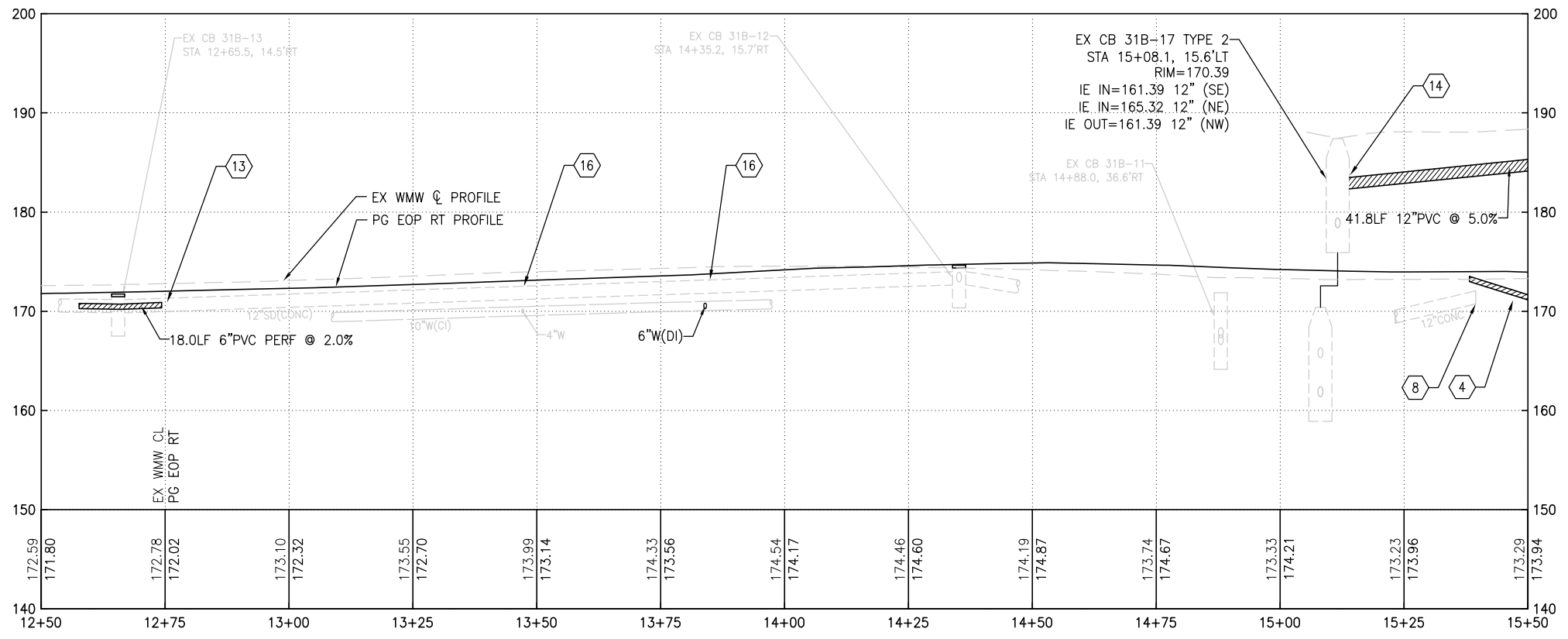
- ① SAWCUT, FULL DEPTH, 1'(TYP) FROM EDGE OF ASPH OR AS FIELD MARKED
- ② REMOVE ASPH PAVEMENT
- ④ RELOCATE ROCKS BEHIND NEW SHOULDER AS DIRECTED BY ENGINEER AS PROPERTY RESTORATION. SIZE ONE MAN OR LESS TYP
- ⑤ PAVE DRIVEWAY, AS FIELD MARKED, PER DTL 5/18
- ⑧ INSTALL NEW SEWER MH RING AND COVER (CITY SUPPLIED) AND ADJUST TO GRADE PER DTL 8/18
- ⑨ ADJUST CB TO GRADE PER DTL 8/18
- ⑪ REPAIR PAVEMENT AS FIELD MARKED PER DTL 4/18
- ⑬ ADJUST WM BOX TO GRADE PER DTL 1/15
- ⑭ FURNISH AND INSTALL NEW 18"x24" CB FRAME AND SOLID LID AND ADJUST TO GRADE PER DTL 8/18
- ⑰ PLACE QUARRY SPALLS OR 2" RAILROAD BALLAST AS DIRECTED BY ENGINEER FOR BACKFILL OVER PERF PIPE PER DTL 3/18

SCHEDULE B - DRAINAGE IMPROVEMENTS

- ④ CONNECT PRIVATE DRAIN LINES TO CB
- ⑧ PLUG AND ABANDON EX CONC PIPE
- ⑬ INSTALL APPROX 18LF OF UNDERDRAIN 6" PVC PERF PIPE PER DTL 3/18 AND CONNECT TO EX CB 31B-13
- ⑭ CONNECT NEW PIPE TO EX CB TYPE 2
- ⑰ IF NECESSARY FOR HYDRANT REMOVAL AND INSTALLATION, REMOVE PIPE AND REPAIR W/ 12" DI PIPE. CONNECT TO CONC PIPE W/ FERNCOS
- ⑰ IF PRIVATE DRAIN IS FOUND DURING CONSTRUCTION, CONNECT TO CB

SCHEDULE C - WATER IMPROVEMENTS

- ① REMOVE EX FIRE HYDRANT ASSEMBLY AND VALVE FROM EX TEE AND SALVAGE TO CITY SHOP. INSTALL PLUG ON EX TEE
- ② INSTALL NEW FIRE HYDRANT PER MI STD DTL W-24A ON SHEET 15 ON EX 10" CI MAIN USING TAPPING SLEEVE. FIELD DETERMINE HYDRANT LOCATION AS DIRECTED BY ENGINEER
- ⑤ POTHOLE TO EXPOSE THE UNKNOWN WATER SERVICE LINE ON THE CITY SIDE OF THE METER SO THE ENGINEER MAY VERIFY THE MATERIAL TYPE. DEPENDING ON MATERIAL TYPE, SEE SPECIFICATIONS FOR POTENTIAL ADDITIONAL POTHOLES AT THE MAIN AND REPLACEMENT WITH NEW 1" WATER SERVICE PER MI STD DTL W-13 ON SHEET 17. HOUSE # PER PLAN

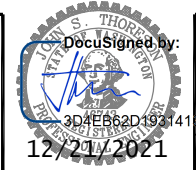


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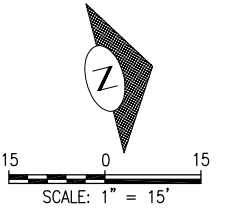
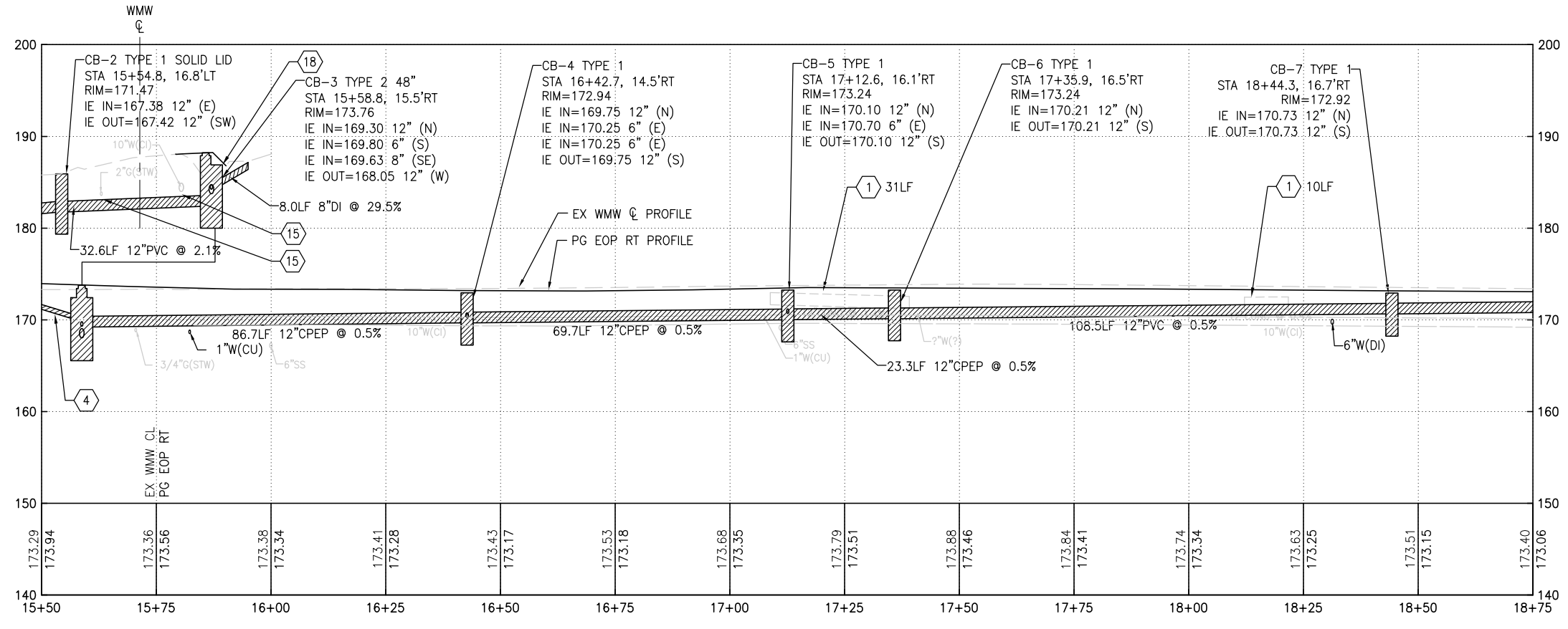
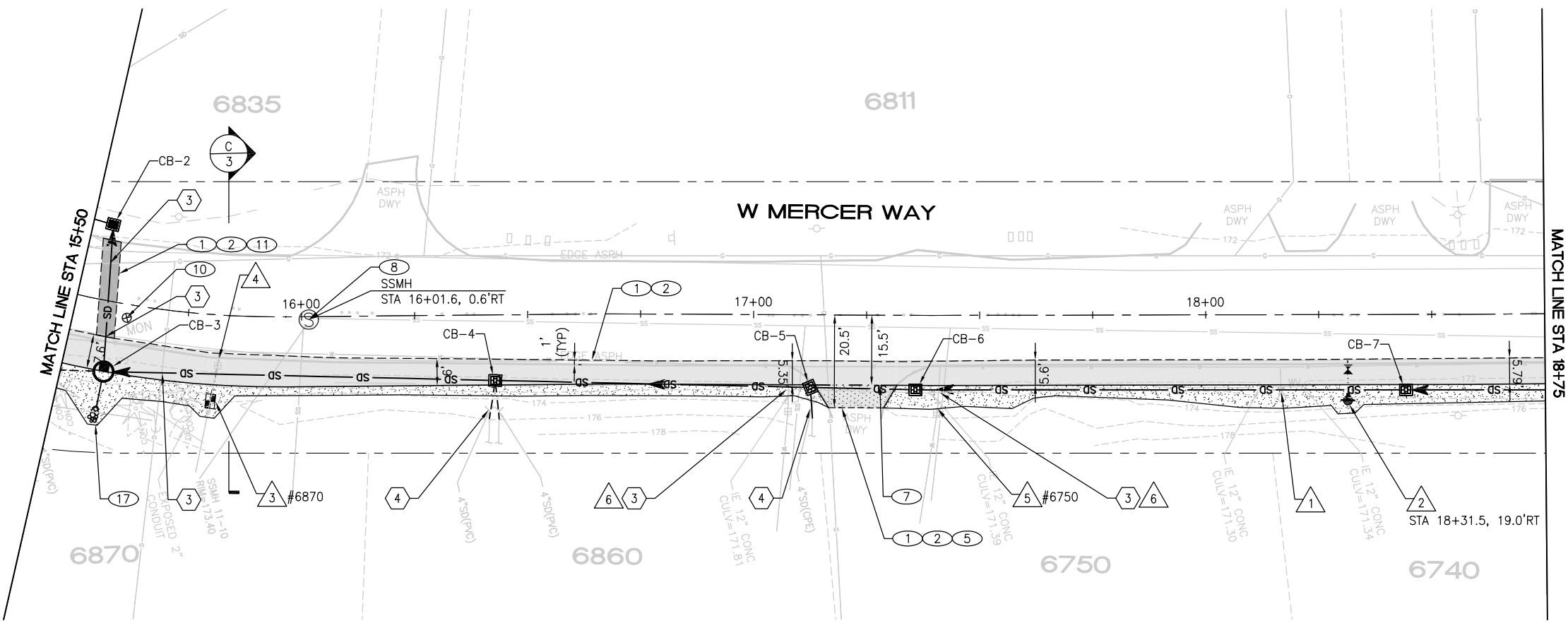
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
SHOULDER WIDENING AND
UTILITY IMPROVEMENTS

PROJECT NO.	22-01
SCALE H:	1"=15'
SCALE V:	1"=7.5'
SHEET	5 OF 19

CONSTRUCTION NOTES

- SCHEDULE A - SHOULDER WIDENING**
- ① SAWCUT, FULL DEPTH, 1'(TYP) FROM EDGE OF ASPH OR AS FIELD MARKED
 - ② REMOVE ASPH PAVEMENT
 - ⑤ PAVE DRIVEWAY, AS FIELD MARKED, PER DTL 5/18
 - ⑦ PAVE DRIVEWAY FLOW LINE. DISTANCE FROM CENTER LINE TO FLOW LINE PER PLAN
 - ⑧ INSTALL NEW SEWER MH RING AND COVER (CITY SUPPLIED) AND ADJUST TO GRADE PER DTL 8/18
 - ⑩ FURNISH AND INSTALL MONUMENT CASE AND COVER AND ADJUST TO GRADE PER DTL 8/18
 - ⑪ REPAIR PAVEMENT AS FIELD MARKED PER DTL 4/18
 - ⑰ CONSTRUCT CULVERT INLET-OUTLET PER DTL 2/18
- SCHEDULE B - DRAINAGE IMPROVEMENTS**
- ① REMOVE PIPE
 - ③ POT HOLE EX UTILITY AHEAD OF PIPE LAYING
 - ④ CONNECT PRIVATE DRAIN LINES TO CB
 - ⑮ MAINTAIN 6" MIN CLEARANCE BETWEEN PIPES OR INSTALL POLYETHYLENE FOAM CUSHION AS DIRECTED BY ENGINEER (TYP)
 - ⑱ INSTALL NEW CB TYPE 2 48"Ø WITH FLAT SLAB TOP, FRAME & SOLID LID WITH BACK EDGE AT EOP, AND MIN 1' RECTANGULAR ADJUSTMENT RISER TO PROVIDE AT LEAST 1' OF CSTC COVER AROUND STRUCTURE. SEE WSDOT STD PLAN B-10.20-02 ON SHT 17
- SCHEDULE C - WATER IMPROVEMENTS**
- ① REMOVE EX FIRE HYDRANT ASSEMBLY AND VALVE FROM EX TEE AND SALVAGE TO CITY SHOP. INSTALL PLUG ON EX TEE
 - ② INSTALL NEW FIRE HYDRANT PER MI STD DTL W-24A ON SHEET 15 ON EX 10" CI MAIN USING TAPPING SLEEVE. FIELD DETERMINE HYDRANT LOCATION AS DIRECTED BY ENGINEER
 - ③ INSTALL/RELOCATE 1" WATER SERVICE PER MI STD DTL W-13 ON SHT 17. DISCONNECT AND REMOVE EX WATER SERVICE. INSTALL NEW METER, SETTER, AND BOX BEHIND NEW PAVED SHOULDER AS DIRECTED BY ENGINEER. RECONNECT TO EX SERVICE. HOUSE # PER PLAN. SEE WATER SERVICE SCHEDULE PER DTL 2/15
 - ④ POT HOLE TO EXPOSE THE WATER SERVICE ON THE CITY SIDE OF THE METER SO THE ENGINEER MAY VERIFY MATERIAL TYPE AND THE CONTRACTOR MAY VERIFY NECESSARY PARTS FOR REPLACEMENT AND TO EXPOSE THE EX SERVICE TAP AT THE MAIN SO THE ENGINEER MAY VERIFY WATER SERVICE MATERIAL TYPE AND VERIFY IF THE EX TAP MAY BE REUSED OR IF A NEW TAP IS REQUIRED
 - ⑤ POT HOLE TO EXPOSE THE UNKNOWN WATER SERVICE LINE ON THE CITY SIDE OF THE METER SO THE ENGINEER MAY VERIFY THE MATERIAL TYPE. DEPENDING ON MATERIAL TYPE, SEE SPECIFICATIONS FOR POTENTIAL ADDITIONAL POT HOLE AT THE MAIN AND REPLACEMENT WITH NEW 1" WATER SERVICE PER MI STD DTL W-13 ON SHEET 17. HOUSE # PER PLAN
 - ⑥ IF NECESSARY FOR NEW UTILITY INSTALLATION, EXCAVATE ALONG EX WATER SERVICE AND RAISE OR LOWER AS DIRECTED BY ENGINEER TO AVOID A CONFLICT

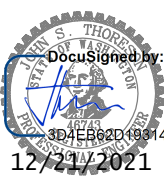


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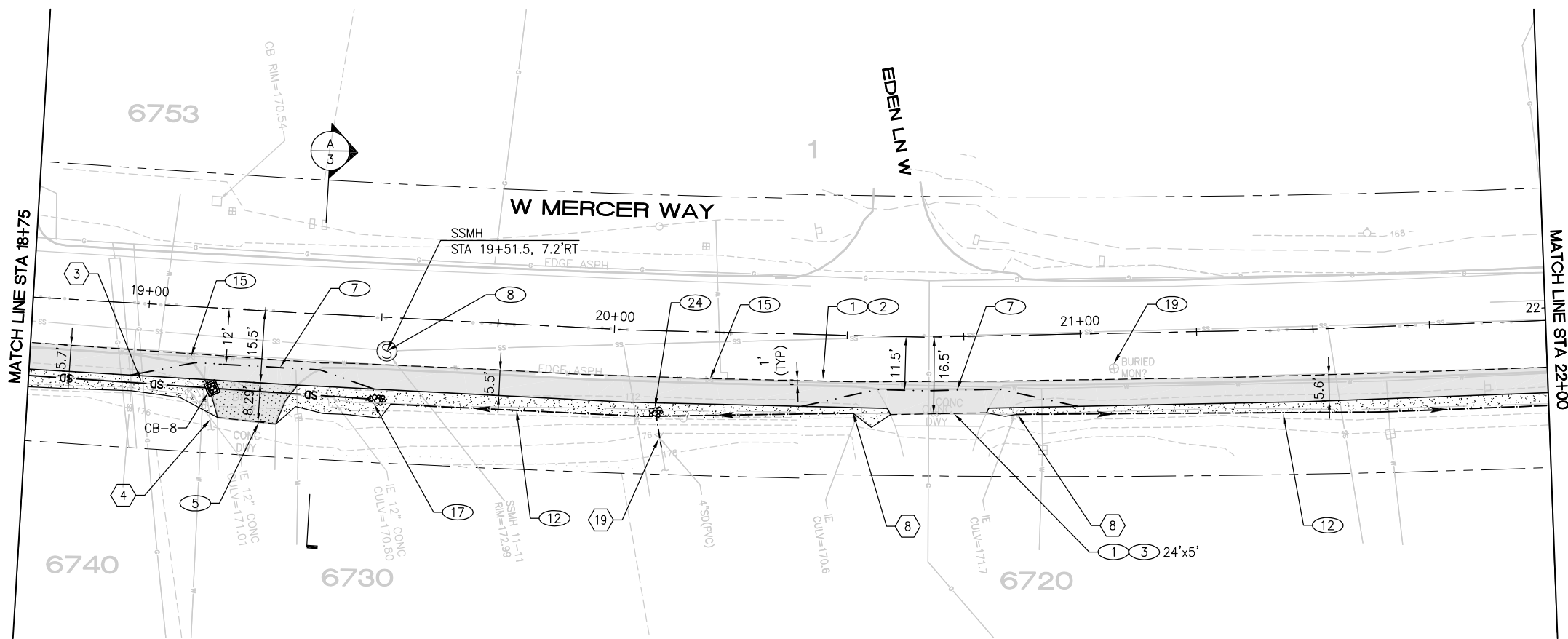


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DESIGN	JUST
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3

SHOULDER WIDENING AND
UTILITY IMPROVEMENTS

PROJECT NO.	22-01
SCALE H:	1"=15'
SCALE V:	1"=7.5'
SHEET	6 OF 19

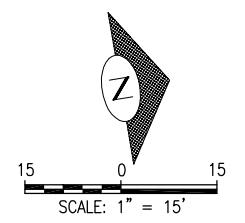
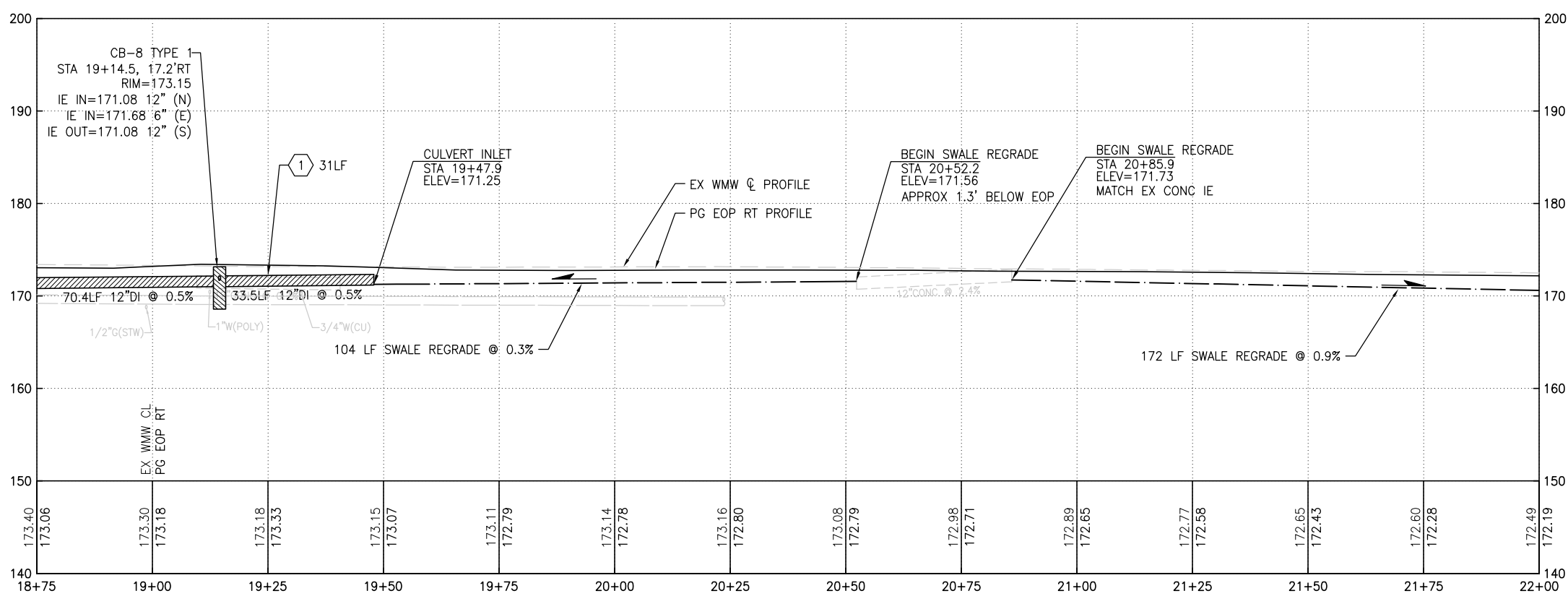


CONSTRUCTION NOTES

- SCHEDULE A - SHOULDER WIDENING**
- ① SAWCUT, FULL DEPTH, 1'(TYP) FROM EDGE OF ASPH OR AS FIELD MARKED
 - ② REMOVE ASPH PAVEMENT
 - ③ REMOVE CONC PAVEMENT
 - ⑤ PAVE DRIVEWAY, AS FIELD MARKED, PER DTL 5/18
 - ⑦ PAVE DRIVEWAY FLOW LINE. DISTANCE FROM CENTER LINE TO FLOW LINE PER PLAN
 - ⑧ INSTALL NEW SEWER MH RING AND COVER (CITY SUPPLIED) AND ADJUST TO GRADE PER DTL 8/18
 - ⑫ CONSTRUCT NEW CSTC SWALE AND REGRADE EX FLOW LINE FOR POSITIVE DRAINAGE
 - ⑮ ADJUST VALVE BOX TO GRADE PER DTL 8/18
 - ⑰ CONSTRUCT CULVERT INLET-OUTLET PER DTL 2/18
 - ⑲ CAREFULLY EXCAVATE TO LOCATE POSSIBLE BURIED MONUMENT. IF FOUND, INSTALL MONUMENT CASE AND COVER AND ADJUST TO GRADE PER DTL 8/18. IF NO MONUMENT IS FOUND, REPAIR PAVEMENT PER DTL 4/18
 - ⑳ CONSTRUCT SMALL QUARRY SPALL SPLASH PAD AS DIRECTED BY ENGINEER

SCHEDULE B - DRAINAGE IMPROVEMENTS

- ① REMOVE PIPE
- ③ POT HOLE EX UTILITY AHEAD OF PIPE LAYING
- ④ CONNECT PRIVATE DRAIN LINES TO CB
- ⑧ PLUG AND ABANDON EX CONC PIPE
- ⑲ CONNECT TO PRIVATE DRAIN LINE AND EXTEND TO NEW SWALE



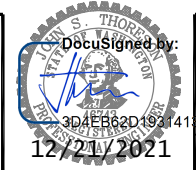
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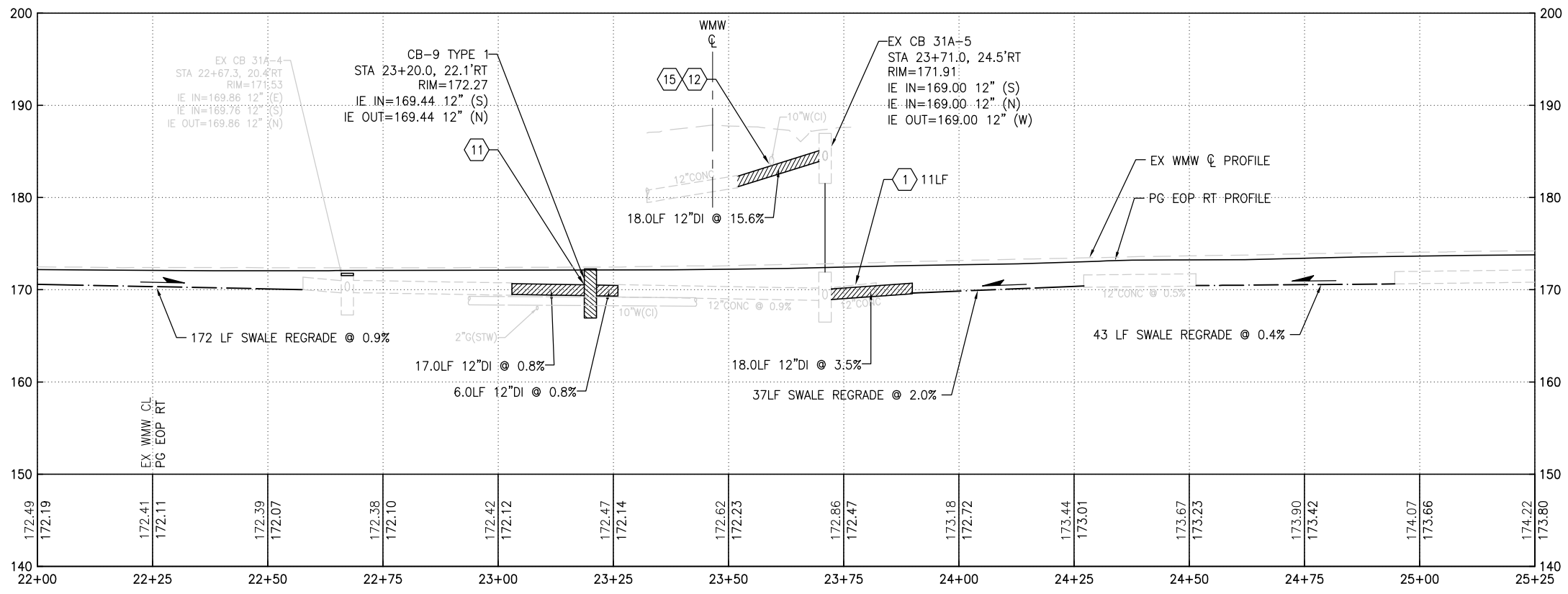
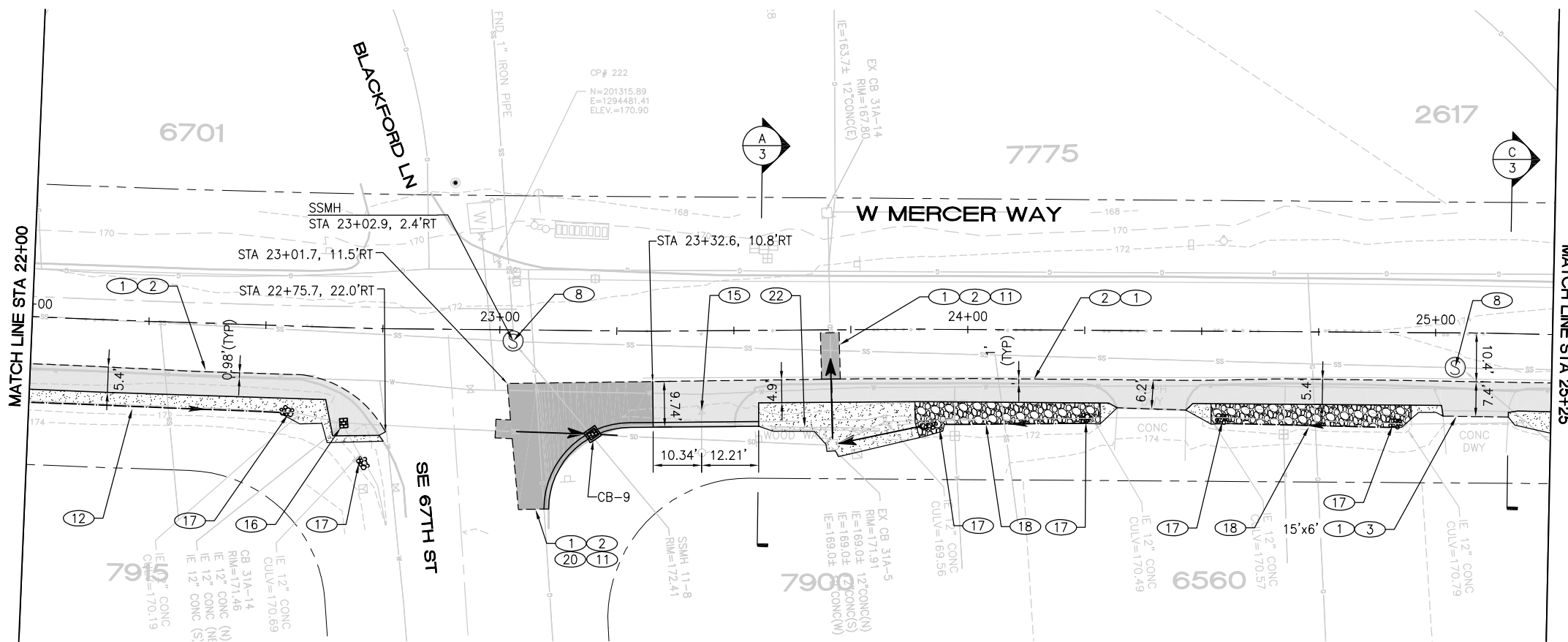
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
SHOULDER WIDENING AND
UTILITY IMPROVEMENTS

PROJECT NO.	22-01
SCALE: H:	1"=15'
SCALE: V:	1"=7.5'
SHEET	7 OF 19

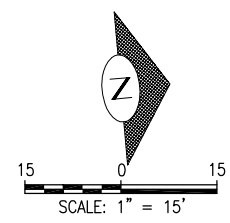


CONSTRUCTION NOTES

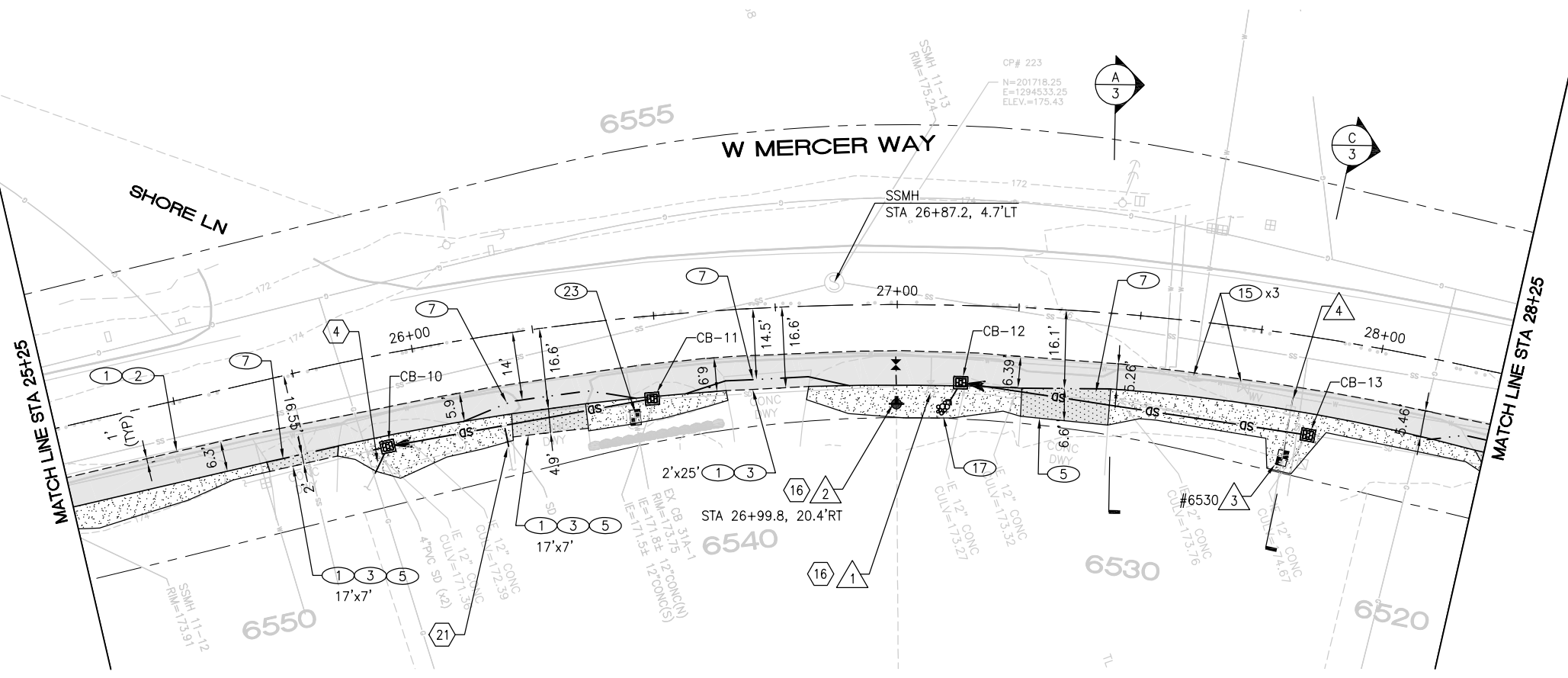
- SCHEDULE A - SHOULDER WIDENING**
- ① SAWCUT, FULL DEPTH, 1'(TYP) FROM EDGE OF ASPH OR AS FIELD MARKED
 - ② REMOVE ASPH PAVEMENT
 - ③ REMOVE CONC PAVEMENT
 - ⑧ INSTALL NEW SEWER MH RING AND COVER (CITY SUPPLIED) AND ADJUST TO GRADE PER DTL 8/18
 - ⑪ REPAIR PAVEMENT AS FIELD MARKED PER DTL 4/18
 - ⑫ CONSTRUCT NEW CSTC SWALE AND REGRADE EX FLOW LINE FOR POSITIVE DRAINAGE
 - ⑮ ADJUST VALVE BOX TO GRADE PER DTL 8/18
 - ⑯ FURNISH AND INSTALL NEW 18"x24" CB FRAME AND VANED GRATE AND ADJUST TO GRADE PER DTL 8/18
 - ⑰ CONSTRUCT CULVERT INLET-OUTLET PER DTL 2/18
 - ⑱ CONSTRUCT NEW QUARRY SPALL SWALE PER TYPICAL SECTION AND REGRADE EX FLOW LINE FOR POSITIVE DRAINAGE
 - ⑳ FIELD DETERMINE REMOVAL LIMITS TO REGRADE AND REPAVE NE CORNER TO CREATE A FLOWLINE AT NEW THICKENED EDGE ALONG THE EOP. COORDINATE GRADING WITH NEW CB
 - ㉒ REMOVE AND DISPOSE OF RAILROAD TIE LANDSCAPE TIMBERS

SCHEDULE B - DRAINAGE IMPROVEMENTS

- ① REMOVE PIPE
- ⑪ FIELD LOCATE AND INSTALL NEW CB ON EX 12" CONC PIPE IN NEW THICKENED EDGE FLOW LINE. REPLACE EX 12" CONC PIPE W/ APPROX 17 LF OF 12" DI PIPE SOUTH OF NEW CB TO REPAIR LARGE JOINT OFFSETS APPROX 34' AND 52' NORTH OF EX CB 31A-14. FIELD DETERMINE 12" DI PIPE REPLACEMENT FOR CONNECTION NORTH OF NEW CB. CONNECT TO CONC PIPE W/ FERNCOS
- ⑫ REPLACE EX 12" CONC PIPE W/ APPROX 18 LF OF 12" DI PIPE WEST OF EX CB 31A-5 TO REPAIR LARGE JOINT OFFSET 13' FROM CB. FIELD DETERMINE IF 11.25' OR 22.5' ELBOWS OR A SERIES OF SHORT STICKS OF PIPE DEFLECTED AT THE JOINTS ARE NECESSARY TO AVOID THE WATER MAIN. CONNECT TO CONC PIPE W/ FERNCO
- ⑮ MAINTAIN 6" MIN CLEARANCE BETWEEN PIPES OR INSTALL POLYETHYLENE FOAM CUSHION AS DIRECTED BY ENGINEER (TYP)



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 DRAFT CFG
 CHECK JST
 CITY OF MERCER ISLAND
 ROADSIDE SHOULDER IMPROVEMENTS
 WEST MERCER WAY PHASE 3
 SHOULDER WIDENING AND
 UTILITY IMPROVEMENTS
 PROJECT NO. 22-01
 SCALE H: 1"=15'
 V: 1"=7.5'
 SHEET 8 OF 19

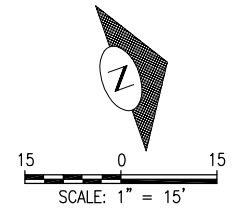
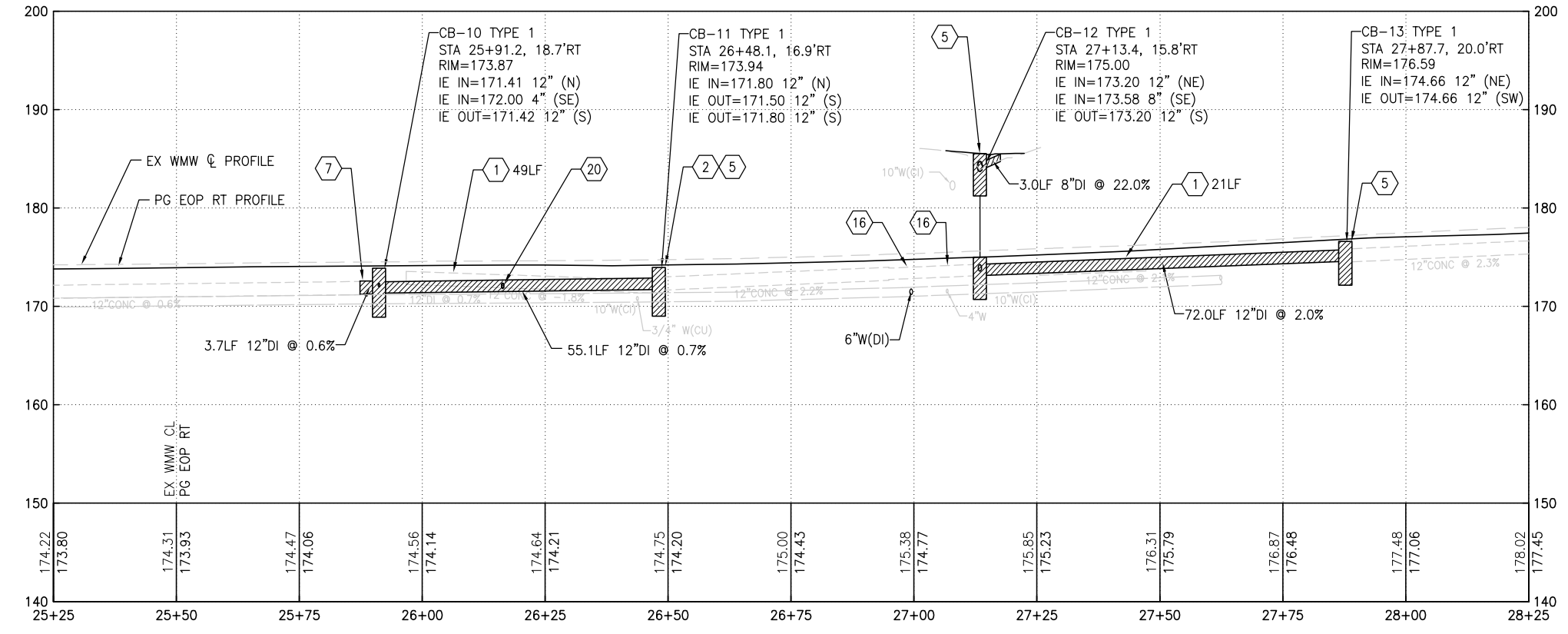


CONSTRUCTION NOTES

- SCHEDULE A - SHOULDER WIDENING**
- ① SAWCUT, FULL DEPTH, 1'(TYP) FROM EDGE OF ASPH OR AS FIELD MARKED
 - ② REMOVE ASPH PAVEMENT
 - ③ REMOVE CONC PAVEMENT
 - ⑤ PAVE DRIVEWAY, AS FIELD MARKED, PER DTL 5/18
 - ⑦ PAVE DRIVEWAY FLOW LINE. DISTANCE FROM CENTER LINE TO FLOW LINE PER PLAN
 - ⑮ ADJUST VALVE BOX TO GRADE PER DTL 8/18
 - ⑰ CONSTRUCT CULVERT INLET-OUTLET PER DTL 2/18
 - ⑳ INSTALL NEW WM BOX AND ADJUST TO GRADE PER DTL 1/15

- SCHEDULE B - DRAINAGE IMPROVEMENTS**
- ① REMOVE PIPE
 - ② REMOVE CB
 - ④ CONNECT PRIVATE DRAIN LINES TO CB
 - ⑤ INSTALL NEW CB OR CONC INLET ON END OF EX PIPE
 - ⑦ EXTEND EX 12" CONC PIPE W/ 12" DI PIPE AND CONNECT TO NEW TO CB. CONNECT TO CONC PIPE W/ FERNCO
 - ⑯ IF NECESSARY FOR HYDRANT REMOVAL AND INSTALLATION, REMOVE PIPE AND REPAIR W/ 12" DI PIPE. CONNECT TO CONC PIPE W/ FERNCOS
 - ⑳ INSTALL 12"x6" DI TEE IN PIPE RUN
 - ㉑ CONNECT PRIVATE DRAIN LINE TO DI TEE

- SCHEDULE C - WATER IMPROVEMENTS**
- ① REMOVE EX FIRE HYDRANT ASSEMBLY AND VALVE FROM EX TEE AND SALVAGE TO CITY SHOP. INSTALL PLUG ON EX TEE
 - ② INSTALL NEW FIRE HYDRANT PER MI STD DTL W-24A ON SHEET 15 ON EX 10" CI MAIN USING TAPPING SLEEVE. FIELD DETERMINE HYDRANT LOCATION AS DIRECTED BY ENGINEER
 - ③ INSTALL/RELOCATE 1" WATER SERVICE PER MI STD DTL W-13 ON SHT 17. DISCONNECT AND REMOVE EX WATER SERVICE. INSTALL NEW METER, SETTER, AND BOX BEHIND NEW PAVED SHOULDER AS DIRECTED BY ENGINEER. RECONNECT TO EX SERVICE. HOUSE # PER PLAN. SEE WATER SERVICE SCHEDULE PER DTL 2/15
 - ④ POT HOLE TO EXPOSE THE WATER SERVICE ON THE CITY SIDE OF THE METER SO THE ENGINEER MAY VERIFY MATERIAL TYPE AND THE CONTRACTOR MAY VERIFY NECESSARY PARTS FOR REPLACEMENT AND TO EXPOSE THE EX SERVICE TAP AT THE MAIN SO THE ENGINEER MAY VERIFY WATER SERVICE MATERIAL TYPE AND VERIFY IF THE EX TAP MAY BE REUSED OR IF A NEW TAP IS REQUIRED



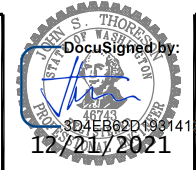
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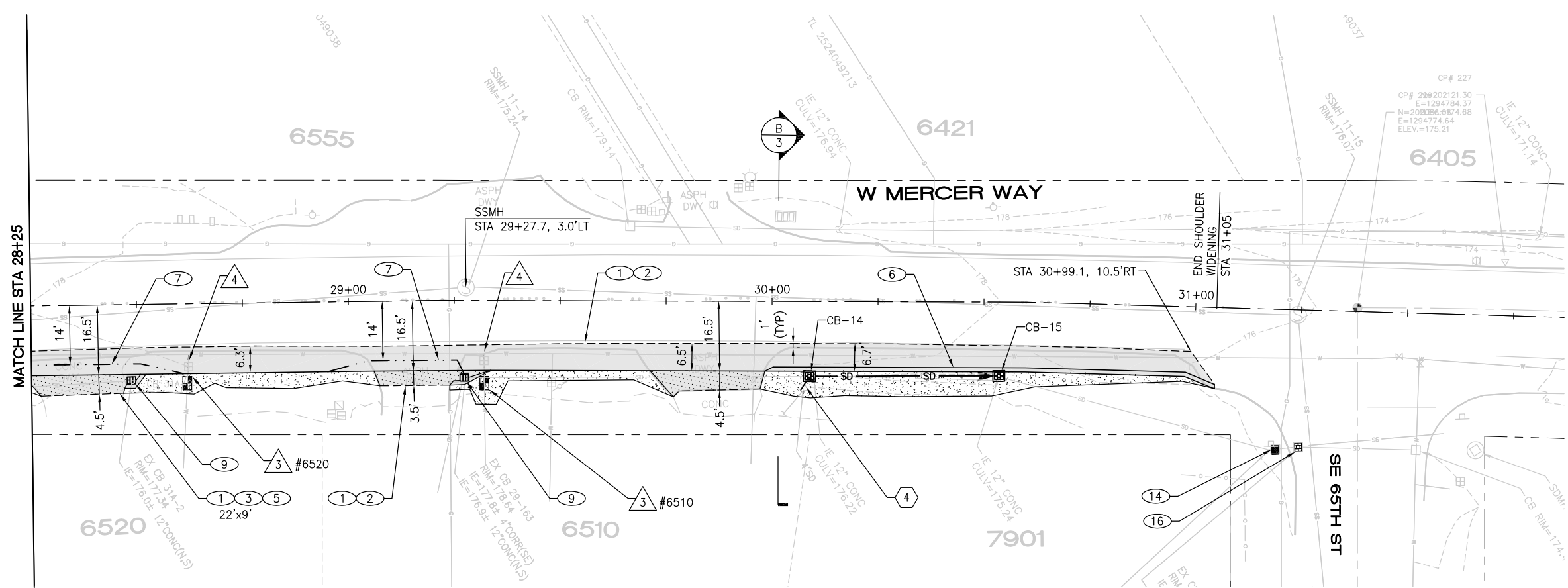
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DESIGN	JUST
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CHECK	JST

CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
SHOULDER WIDENING AND
UTILITY IMPROVEMENTS

PROJECT NO.	22-01
SCALE H:	1"=15'
V:	1"=7.5'
SHEET	9 OF 19



CONSTRUCTION NOTES

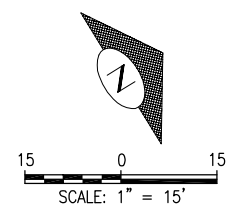
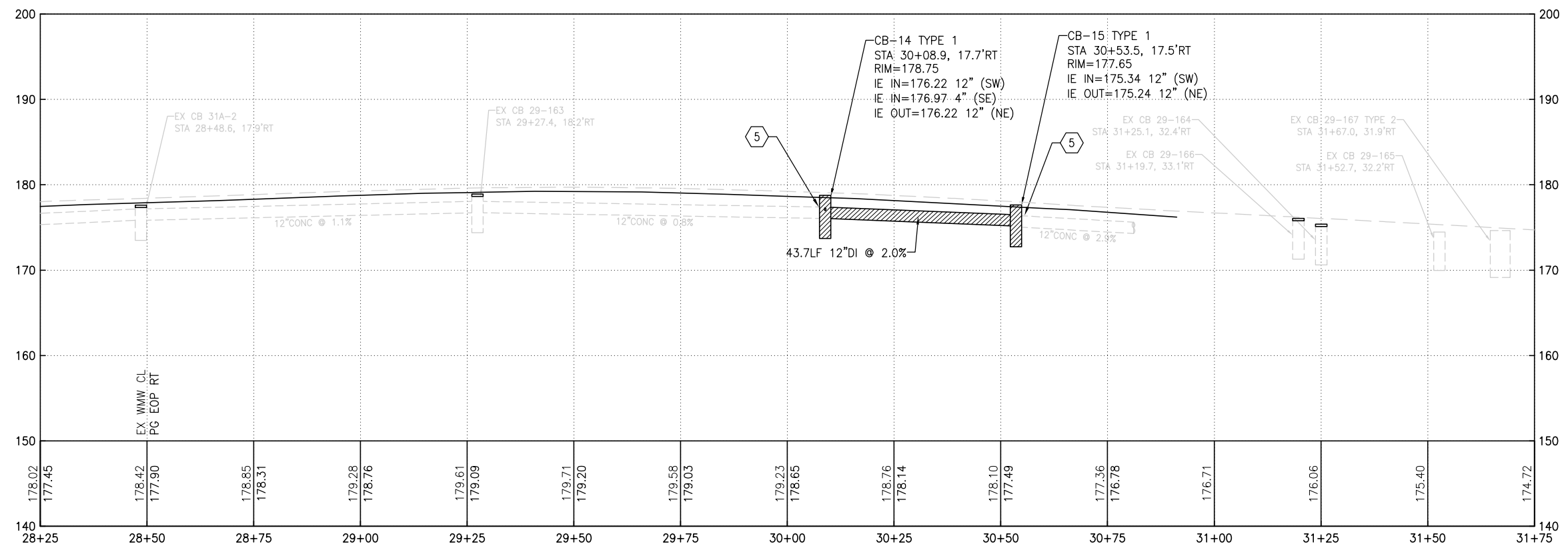
- SCHEDULE A – SHOULDER WIDENING**
- ① SAWCUT, FULL DEPTH, 1'(TYP) FROM EDGE OF ASPH OR AS FIELD MARKED
 - ② REMOVE ASPH PAVEMENT
 - ③ REMOVE CONC PAVEMENT
 - ⑤ PAVE DRIVEWAY, AS FIELD MARKED, PER DTL 5/18
 - ⑥ PAVE HMA THICKENED EDGE PER DTL 7/18
 - ⑦ PAVE DRIVEWAY FLOW LINE. DISTANCE FROM CENTER LINE TO FLOW LINE PER PLAN
 - ⑨ ADJUST CB TO GRADE PER DTL 8/18
 - ⑭ FURNISH AND INSTALL NEW 18"x24" CB FRAME AND SOLID LID AND ADJUST TO GRADE PER DTL 8/18
 - ⑯ FURNISH AND INSTALL NEW 18"x24" CB FRAME AND VANED GRATE AND ADJUST TO GRADE PER DTL 8/18

SCHEDULE B – DRAINAGE IMPROVEMENTS

- ④ CONNECT PRIVATE DRAIN LINES TO CB
- ⑤ INSTALL NEW CB OR CONC INLET ON END OF EX PIPE

SCHEDULE C – WATER IMPROVEMENTS

- ③ INSTALL/RELOCATE 1" WATER SERVICE PER MI STD DTL W-13 ON SHT 17. DISCONNECT AND REMOVE EX WATER SERVICE. INSTALL NEW METER, SETTER, AND BOX BEHIND NEW PAVED SHOULDER AS DIRECTED BY ENGINEER. RECONNECT TO EX SERVICE. HOUSE # PER PLAN. SEE WATER SERVICE SCHEDULE PER DTL 2/15
- ④ POTHOLE TO EXPOSE THE WATER SERVICE ON THE CITY SIDE OF THE METER SO THE ENGINEER MAY VERIFY MATERIAL TYPE AND THE CONTRACTOR MAY VERIFY NECESSARY PARTS FOR REPLACEMENT AND TO EXPOSE THE EX SERVICE TAP AT THE MAIN SO THE ENGINEER MAY VERIFY WATER SERVICE MATERIAL TYPE AND VERIFY IF THE EX TAP MAY BE REUSED OR IF A NEW TAP IS REQUIRED

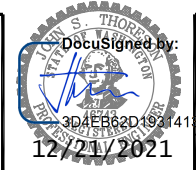


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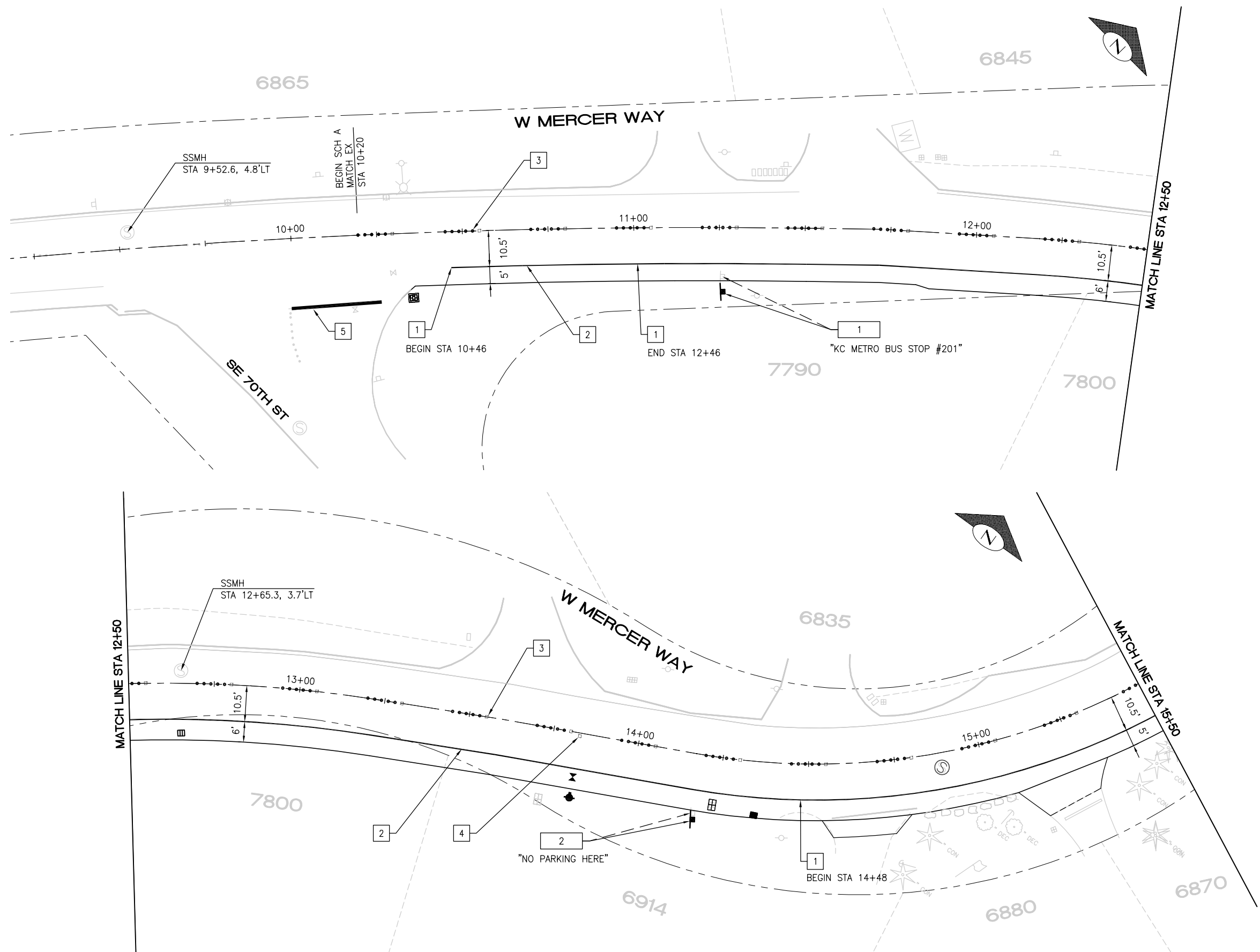


DATE	12/21/21
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3

SHOULDER WIDENING AND
UTILITY IMPROVEMENTS

PROJECT NO.	22-01
SCALE H:	1"=15'
SCALE V:	1"=7.5'
SHEET	10 OF 19

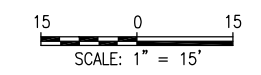


CHANNELIZATION NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REMOVE PAINT LINE. STATIONS ARE APPROXIMATE
 - 2 APPLY PAINT LINE, 4" WHITE, TWO COATS
 - 3 APPLY BROKEN CENTER LINE RPMs PER DTL 1/19
 - 4 PLACE ONE BLUE TYPE 2 RPM AT FIRE HYDRANT
 - 5 APPLY PLASTIC STOP LINE, 12" WHITE

SIGNING NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REINSTALL EX KC METRO BUS STOP SIGN AND EX POST SIMILAR TO DTL 2/19. RELOCATE SIGN THE SAME DAY IT IS REMOVED.
 - 2 RELOCATE EX SIGN AND EX POST PER DTL 2/19



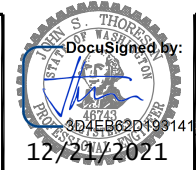
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3

CHANNELIZATION AND SIGNING

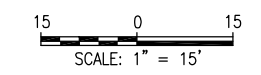
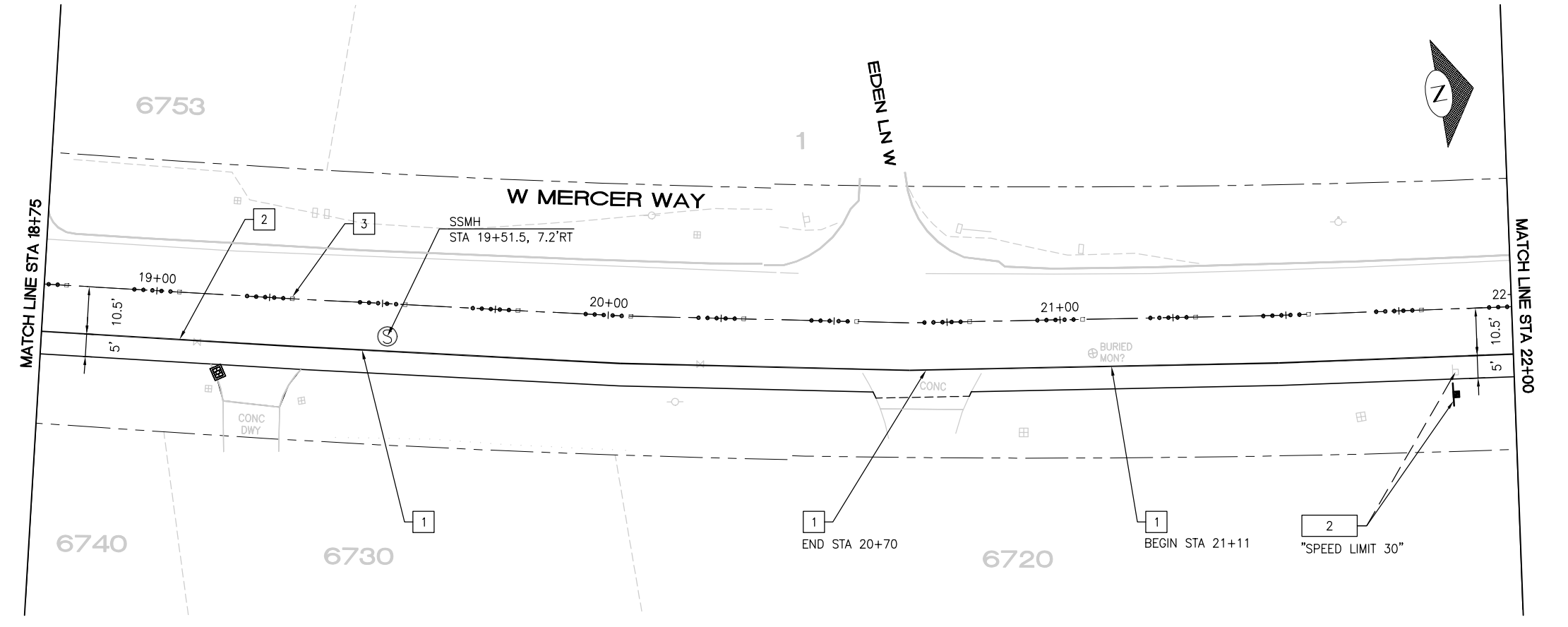
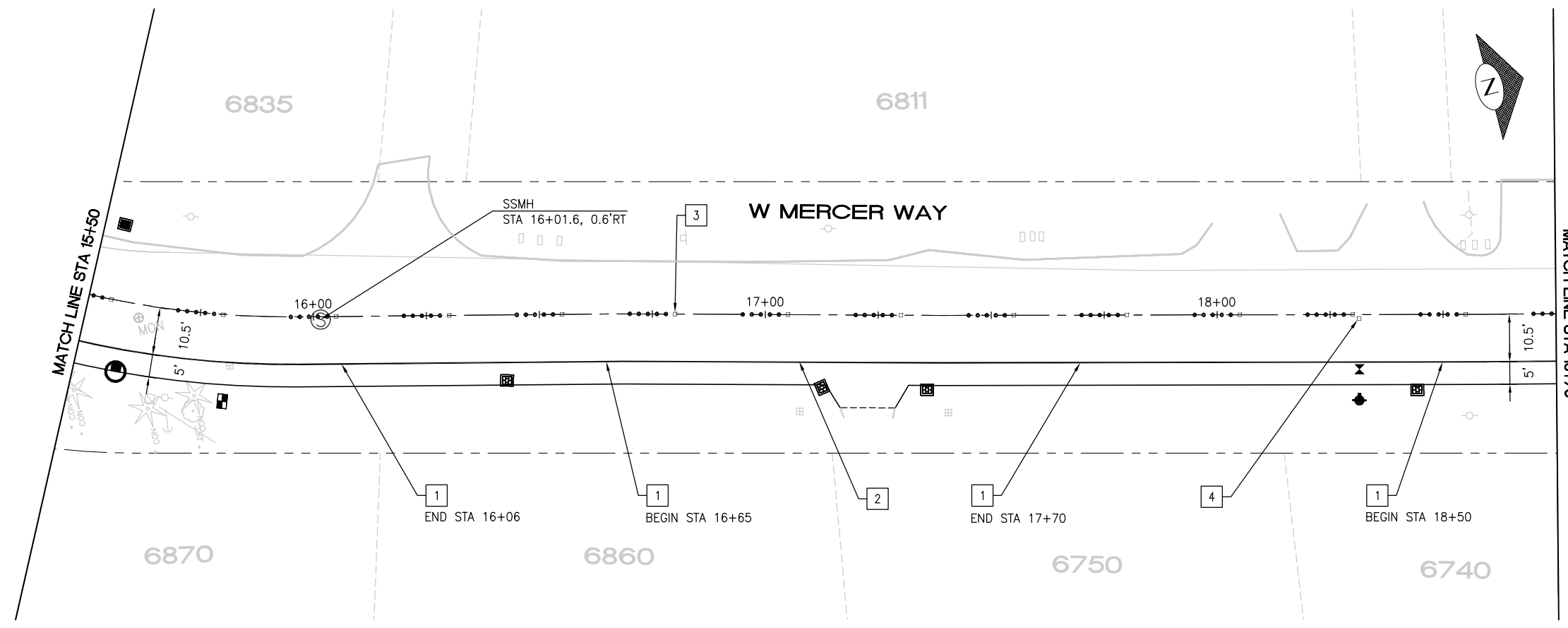
PROJECT NO.	22-01
SCALE	1"=15'
SHEET	11 OF 19

CHANNELIZATION NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REMOVE PAINT LINE. STATIONS ARE APPROXIMATE
 - 2 APPLY PAINT LINE, 4" WHITE, TWO COATS
 - 3 APPLY BROKEN CENTER LINE RPMs PER DTL 1/19
 - 4 PLACE ONE BLUE TYPE 2 RPM AT FIRE HYDRANT

SIGNING NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REINSTALL EX KC METRO BUS STOP SIGN AND EX POST SIMILAR TO DTL 2/19. RELOCATE SIGN THE SAME DAY IT IS REMOVED.
 - 2 RELOCATE EX SIGN AND EX POST PER DTL 2/19



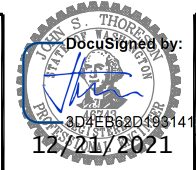
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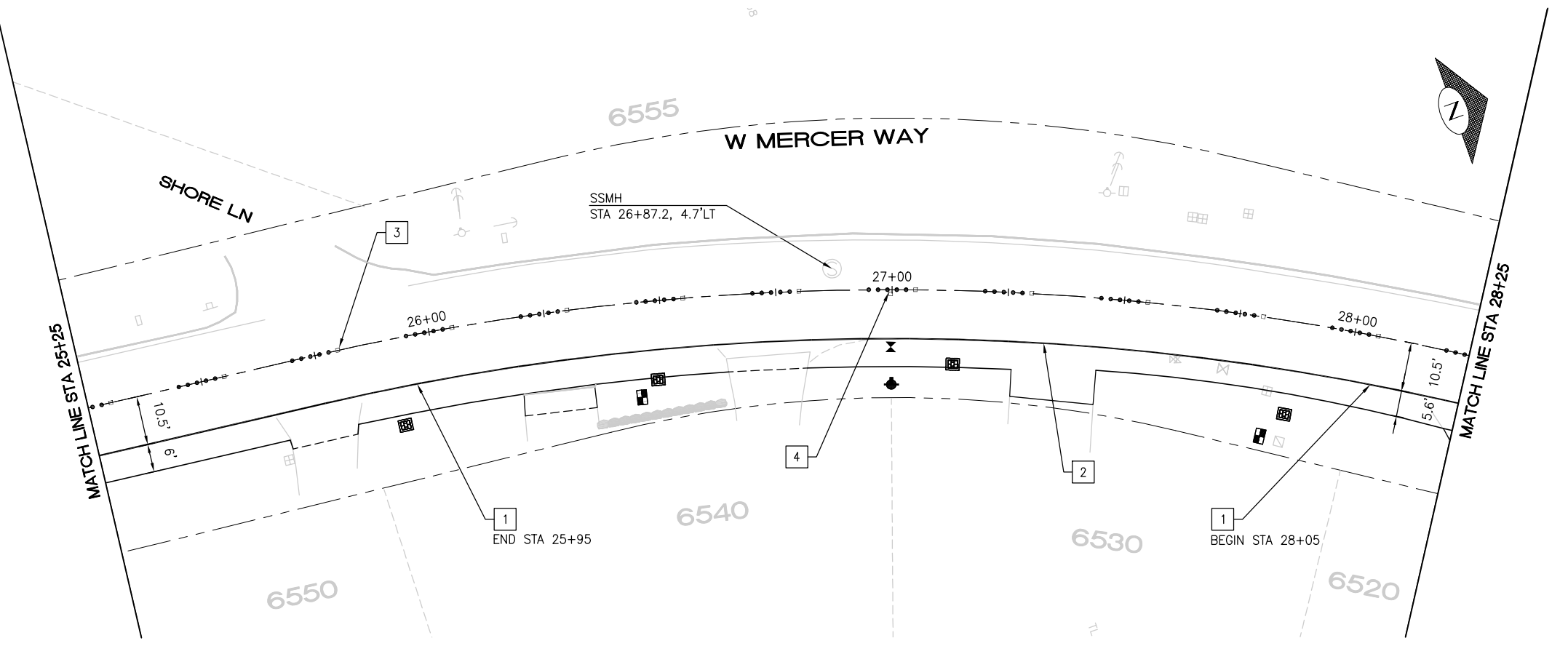
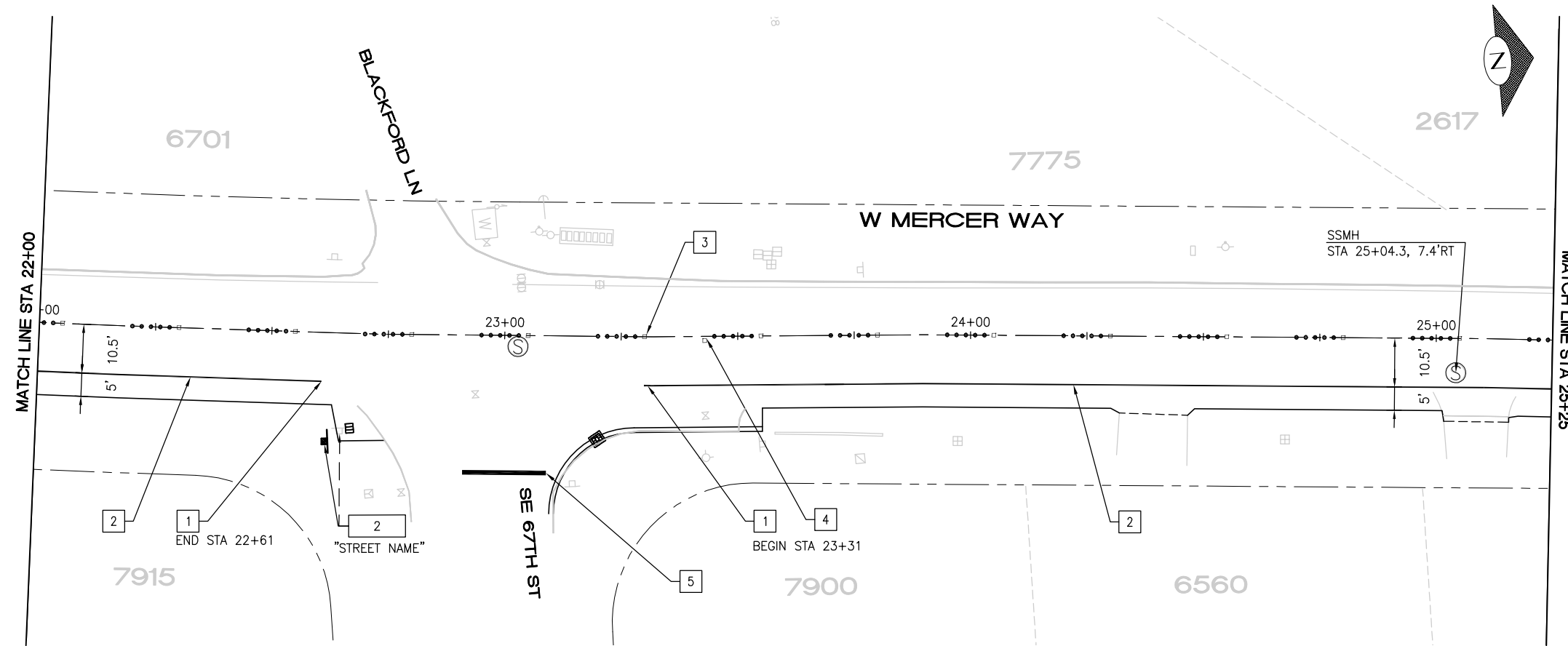
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DESIGN	JST
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
CHANNELIZATION AND
SIGNING

PROJECT NO.	22-01
SCALE	1"=15'
SHEET	12 OF 19

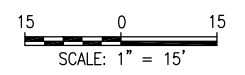


CHANNELIZATION NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REMOVE PAINT LINE. STATIONS ARE APPROXIMATE
 - 2 APPLY PAINT LINE, 4" WHITE, TWO COATS
 - 3 APPLY BROKEN CENTER LINE RPMs PER DTL 1/19
 - 4 PLACE ONE BLUE TYPE 2 RPM AT FIRE HYDRANT
 - 5 APPLY PLASTIC STOP LINE, 12" WHITE

SIGNING NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REINSTALL EX KC METRO BUS STOP SIGN AND EX POST SIMILAR TO DTL 2/19. RELOCATE SIGN THE SAME DAY IT IS REMOVED.
 - 2 RELOCATE EX SIGN AND EX POST PER DTL 2/19



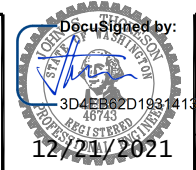
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
CHANNELIZATION AND
SIGNING

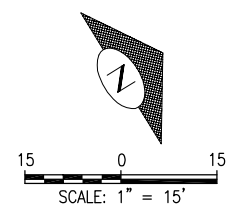
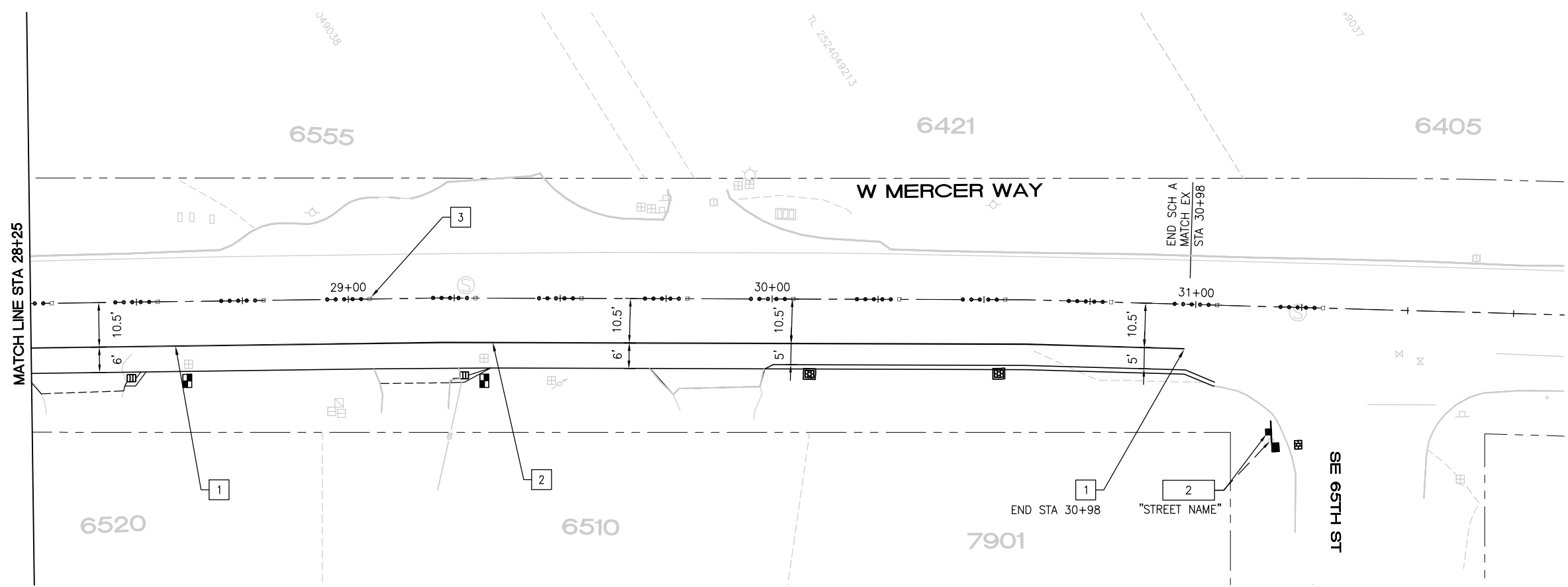
PROJECT NO.	22-01
SCALE	1"=15'
SHEET	13 OF 19

CHANNELIZATION NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REMOVE PAINT LINE. STATIONS ARE APPROXIMATE
 - 2 APPLY PAINT LINE, 4" WHITE, TWO COATS
 - 3 APPLY BROKEN CENTER LINE RPMs PER DTL 1/19
 - 4 PLACE ONE BLUE TYPE 2 RPM AT FIRE HYDRANT
 - 5 APPLY PLASTIC STOP LINE, 12" WHITE

SIGNING NOTES

- SCHEDULE A – SHOULDER WIDENING
- 1 REINSTALL EX KC METRO BUS STOP SIGN AND EX POST SIMILAR TO DTL 2/19. RELOCATE SIGN THE SAME DAY IT IS REMOVED.
 - 2 RELOCATE EX SIGN AND EX POST PER DTL 2/19



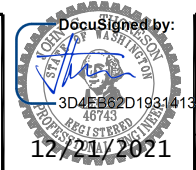
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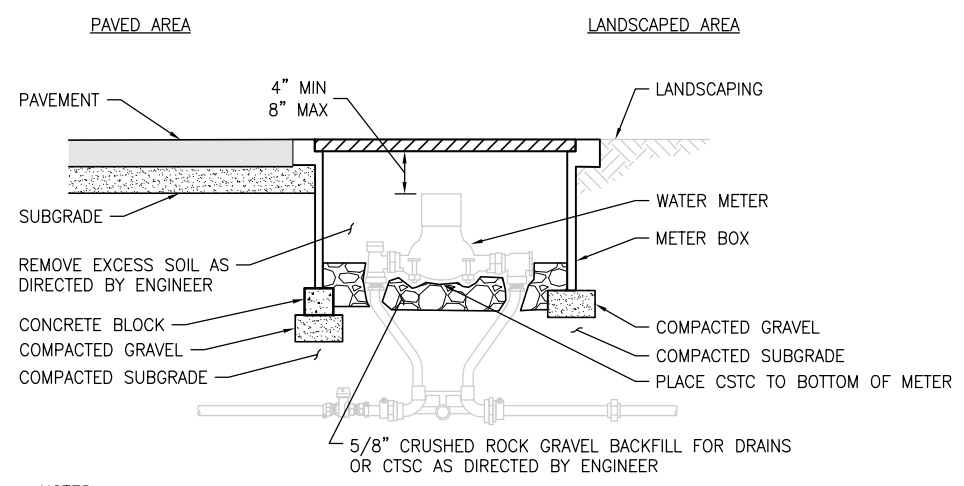
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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
CHANNELIZATION AND
SIGNING

PROJECT NO.	22-01
SCALE	1"=15'
SHEET	14 OF 19

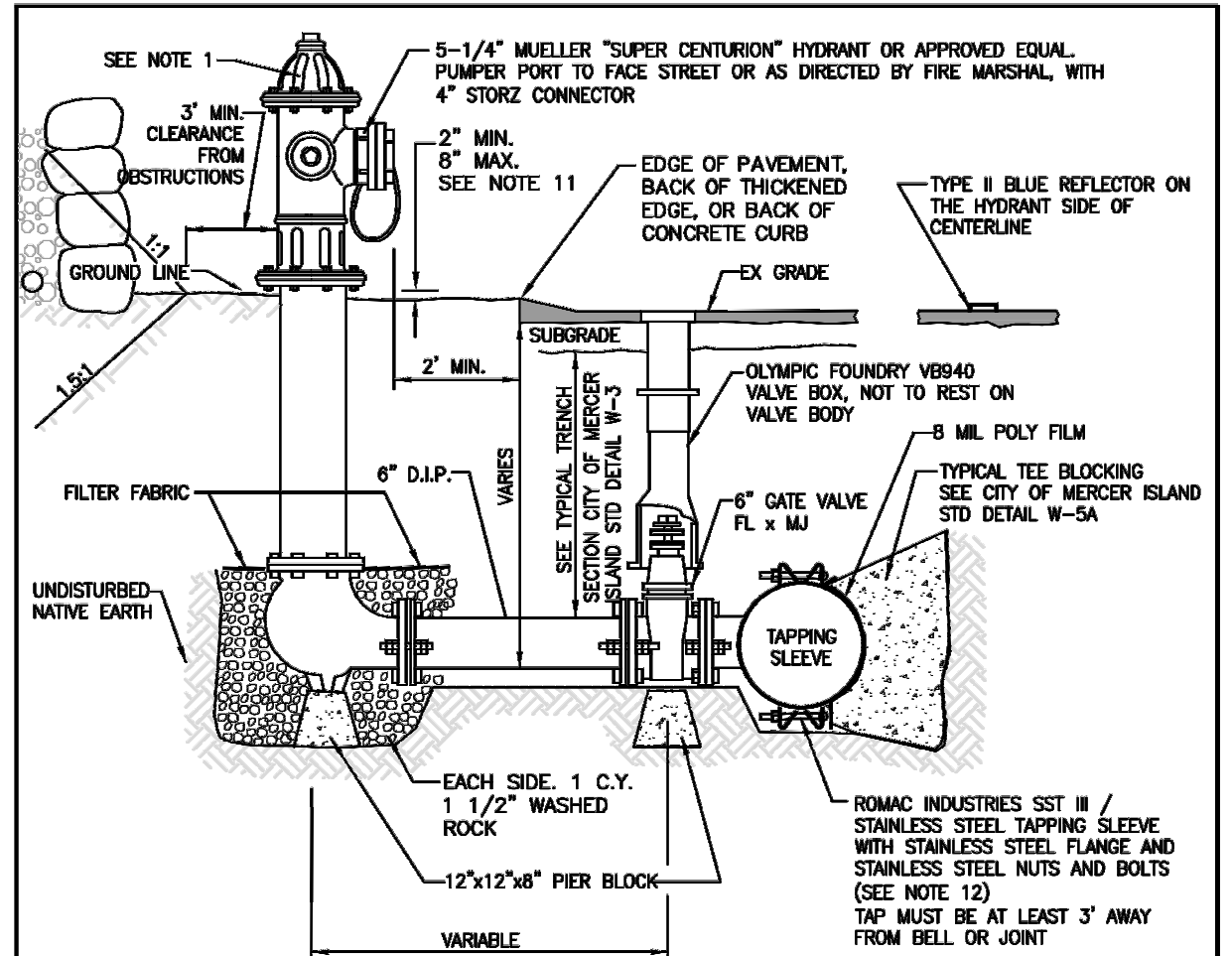


- NOTES:
1. PLACE CRUSHED ROCK BACKFILL TO THE BOTTOM OF THE METER TO PREVENT FREEZING.
 2. PLACE THE METER BOX SO VALVES ON EITHER SIDE OF THE METER ARE OPERABLE FROM THE INSIDE OF THE METER BOX.
 3. METER BOX SHALL BE PROVIDED BY CITY (FOG TITE J20S STEEL BOX OR EQUAL).

1 WATER METER BOX
NTS

ADDRESS	LONG/SHORT	EX WATER SERVICE MATERIAL	METER SIZE	METER NUMBER	WATERMAIN SIZE AND MATERIAL	LENGTH OF SERVICE LINE TRENCH (APPROX)	COMMENTS
6510 W MERCER WAY	SHORT	COPPER	3/4"	42087153	10" CI	8 LF	RELOCATE
6520 W MERCER WAY	SHORT	COPPER	3/4"	42087032	10" CI	7 LF	RELOCATE
6530 W MERCER WAY	SHORT	UNKNOWN	3/4"	42087146	10" CI	13 LF	RELOCATE
6750 W MERCER WAY	SHORT	UNKNOWN	3/4"	9972994	10" CI	10 LF	VERIFY MATERIAL
6870 W MERCER WAY	SHORT	COPPER	3/4"	40202664	10" CI	11 LF	RELOCATE
6914 W MERCER WAY	SHORT	UNKNOWN	1"	32233563	10" CI	12 LF	VERIFY MATERIAL

2 WATER SERVICE SCHEDULE
NTS



- NOTE:**
1. 1-5 1/4" M.V.O. HYDRANT WITH 2-2 1/2" N.T.S. M.J. INLET WITH LUGS, BRASS-TO-BRASS SUB-SEAT AND 1-4 1/2" PUMPER, SEATTLE STANDARD PIPE THREAD WITH 4" STORZ CONNECTOR ITEM NUMBER HPHA40-40-004/CAP SIZE 4.875-INCH BY 6-INCH.
 2. WET TAP IS ALLOWED ONLY UPON CITY'S APPROVAL. NO SIZE ON SIZE WET TAPS.
 3. NO DOMESTIC CONNECTIONS CAN BE MADE TO THE FIRE HYDRANT RUNS.
 4. ANY FIRE HYDRANT RUN OVER 18 FEET IN LENGTH OF PIPE SHALL HAVE RESTRAINED JOINT GASKETS.
 5. USE ROMA GRIP, OR APPROVED EQUAL, PIPE RESTRAINERS AT VALVE AND HYDRANT BASE.
 6. HYDRANT SHALL BE PAINTED WITH 2 COATS OF FARWEST #250 HIGH GLOSS WHITE PAINT, OR APPROVED EQUAL, APPLIED WITH A PAINT BRUSH. DO NOT APPLY PAINT TO STORZ FITTING, BRASS PORT THREADS, OR BELOW SAFETY FLANGE.
 7. BOLLARDS MAY BE USED TO PROTECT THE HYDRANT ONLY IN PARKING LOTS WHEN NO CURBS ARE PRESENT OR IN EXPOSED AREAS OF PARKING LOTS.
 8. STRAIGHT PIPE TO HYDRANTS FROM MAIN, NO BENDS.
 9. REMOVE CHAINS FROM HYDRANT CAPS.
 10. VALVE AND HYDRANT MUST BE PLUMB.
 11. THIS DISTANCE IS MEASURED FROM BOTTOM OF SAFETY FLANGE TO LEVEL OF FINISH GRADE BELOW HYDRANT.
 12. TAPPING SLEEVE O.D. (OUTSIDE DIAMETER) RANGE MUST BE COMMENSURATE WITH PIPE O.D.

CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
FIRE HYDRANT ASSEMBLY -
WET TAP INSTALLATION

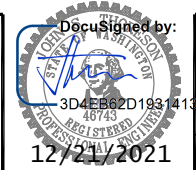
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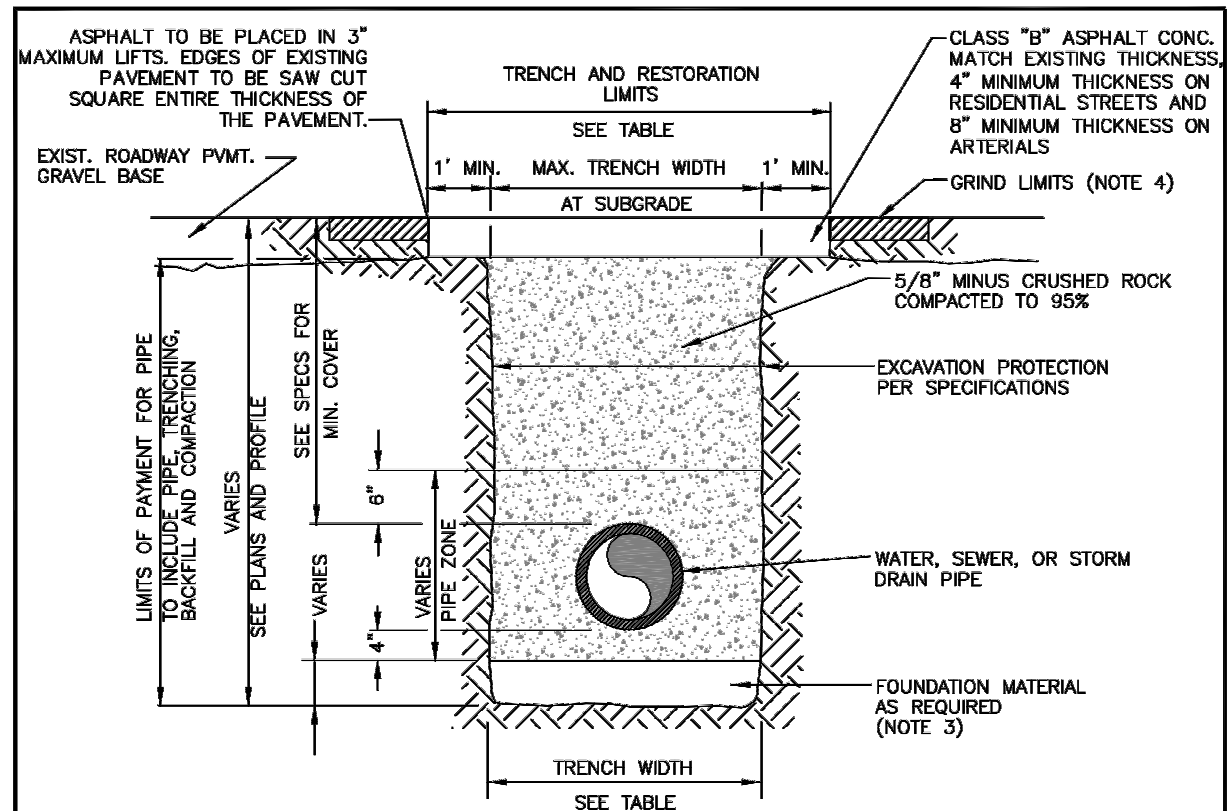
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CHECK	JST


CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
DETAILS

PROJECT NO.	22-01
SCALE	NONE
SHEET	15 OF 19



WIDTH TRENCH			
PIPE SIZE	PIPE ZONE MAX. TRENCH WIDTH	MAX. TRENCH WIDTH AT SUBGRADE	MAX. RESTORATION WIDTH AT SURFACE
WATER SERVICES	2'-0"	2'-0"	4'-0"
4" OR 6"	2'-2"	3'-0"	5'-0"
8"	2'-4"	4'-0"	6'-0"
10"	2'-6"	4'-0"	6'-0"
12"	2'-8"	4'-6"	6'-6"
16"	3'-0"	5'-0"	7'-0"

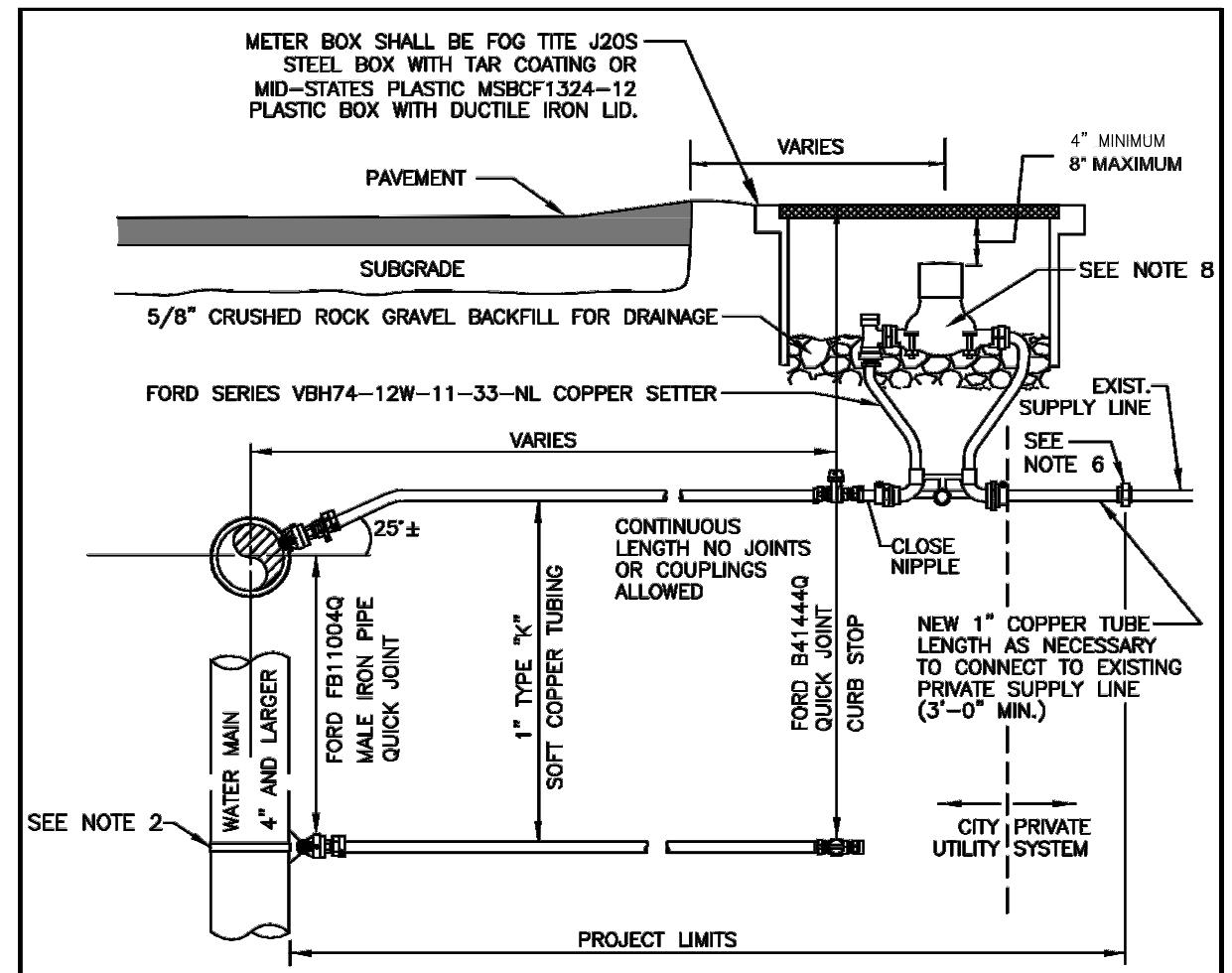
- NOTES**
- CALL IN LOCATES TWO BUSINESS DAYS BEFORE YOU DIG. (1-800-424-5555)
 - IN RIGHT-OF-WAY USE 100% 5/8 MINUS CRUSHED ROCK FOR BEDDING, PIPE ZONE AND BACKFILL.
 - FOUNDATION MATERIAL SHALL BE 1 1/4" MINUS CRUSHED ROCK OR OTHER AGGREGATE AS APPROVED BY CITY ENGINEER.
 - GRIND AND OVERLAY LIMITS SHALL EXTEND A MINIMUM OF 10' PAST THE END OF TRENCH AREAS.
 - SEAL ALL FINAL PATCHING AND PAVING SEAMS WITH LIQUID ASPHALT. SQUEEGEE OR MOP THE SEALER. COVER WITH DRY SAND.




CITY OF MERCER ISLAND
STANDARD DETAILS
WATER

TRENCH SECTION

3-29-2021	NO SCALE	W-3
APPROVED		



- NOTES**
- WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
 - ON EXISTING WATER MAINS USE NYLON COATED D.I. SADDLE WITH STAINLESS STEEL DOUBLE STRAPS, ROMAC 202NS, OR APPROVED EQUAL.
 - MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18'. MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24', ALL HORIZONALLY STAGGERED.
 - PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
 - UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
 - WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (DB SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
 - SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
 - WATER METER SUPPLIED BY CITY.
 - ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
 - NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.



CITY OF MERCER ISLAND
STANDARD DETAILS
WATER

1" WATER METER INSTALLATION

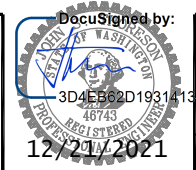
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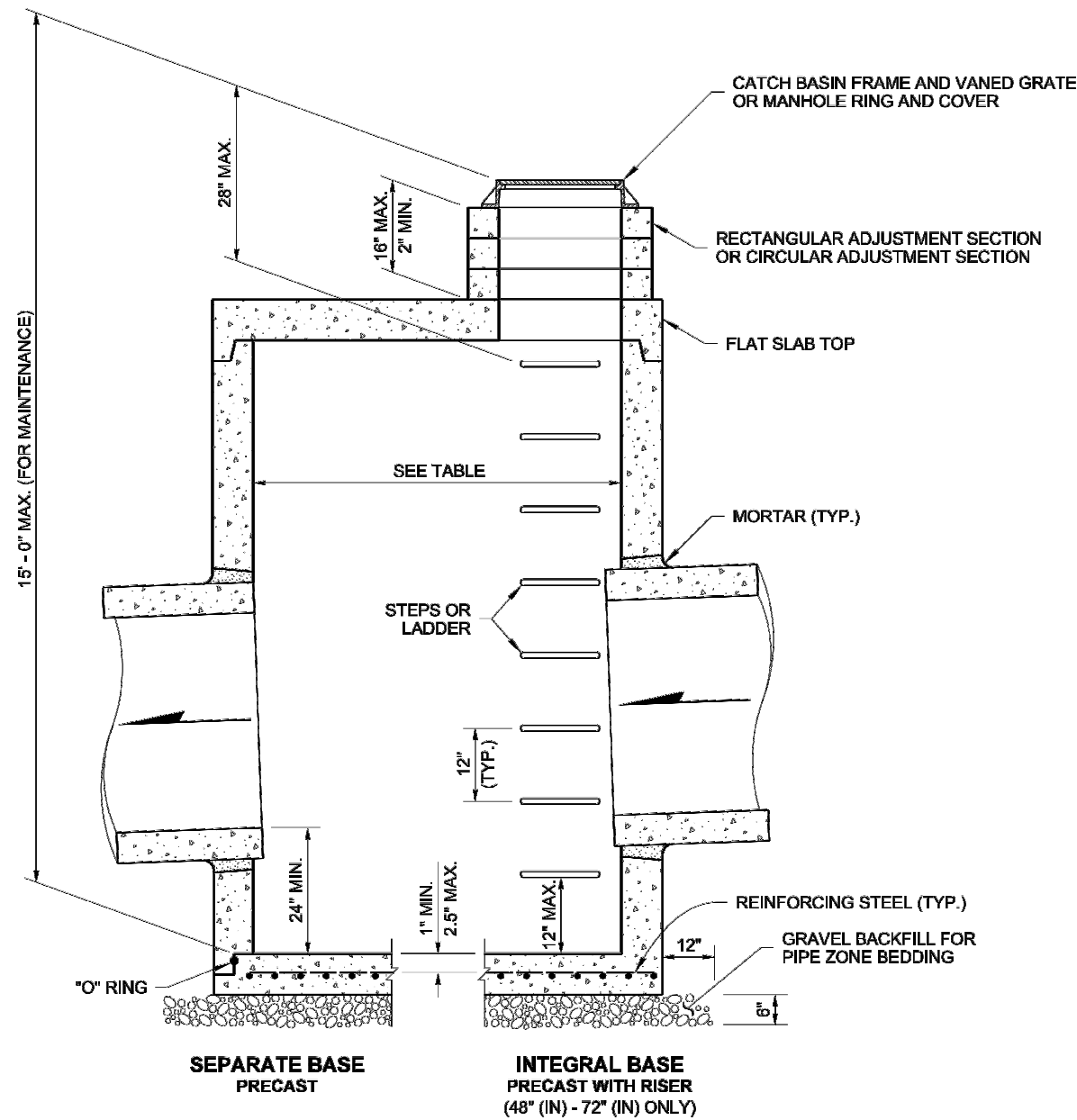
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CHECK	JST

CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3

DETAILS

PROJECT NO.	22-01
SCALE	NONE
SHEET	16 OF 19

DRAWN BY: FERN LIDDELL



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" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) 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 Section 9-04.3**.

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"

CATCH BASIN DIAMETER	PIPE ALLOWANCES				
	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP ① PP ④	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

- ① Corrugated Polyethylene Storm Sewer Pipe (See **Standard Specification Section 9-05.20**)
- ② (See **Standard Specification Section 9-05.12(1)**)
- ③ (See **Standard Specification Section 9-05.12(2)**)
- ④ Polypropylene Pipe (See **Standard Specification Section 9-05.24**)



Heilman, Julie
Feb 20 2018 12:49 PM
cosign

CATCH BASIN TYPE 2
STANDARD PLAN B-10.20-02

SHEET 1 OF 1 SHEET

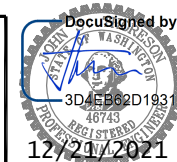
APPROVED FOR PUBLICATION
Carpenter, Jeff
Mar 2 2018 10:01 AM
cosign
STATE DESIGN ENGINEER
Washington State Department of Transportation



CM DESIGN GROUP
1318 East Pike Street
Seattle, WA 98122
206-659-0612

REV. NO.	DATE	DESCRIPTION

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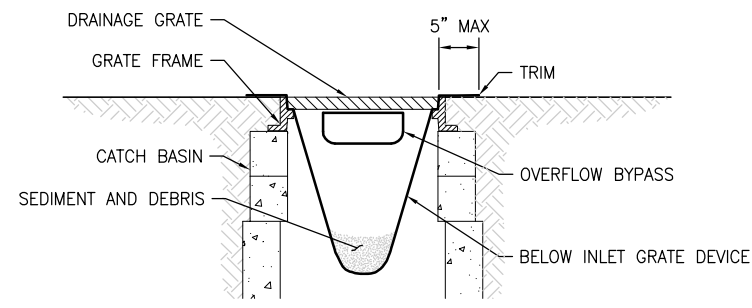


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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3

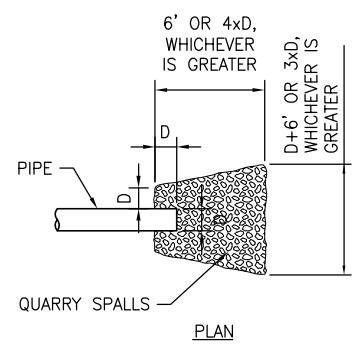
DETAILS

PROJECT NO.	22-01
SCALE	NONE
SHEET	17 OF 19



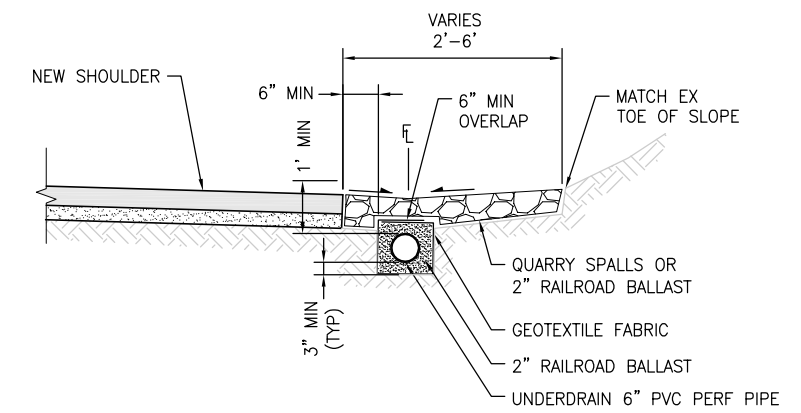
- NOTES:
1. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
 2. THE BIGD SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
 3. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL.

1 INLET PROTECTION
NTS



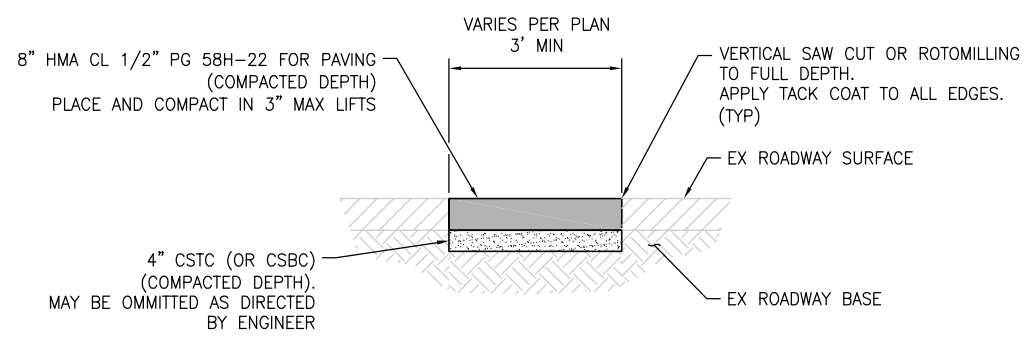
- NOTES:
1. SQUARE CUT END OF PIPE UNLESS DIRECTED OTHERWISE.
 2. PIPE IS NOT IN ALL LOCATIONS. REFER TO PLAN FOR PIPE LOCATIONS.
 3. DEPTH SHALL BE:
12" MIN DEPTH (12"Ø PIPE)
18" MIN DEPTH (15"-18"Ø PIPE)
24" MIN DEPTH (21"-24"Ø PIPE)

2 CULVERT INLET-OUTLET
NTS

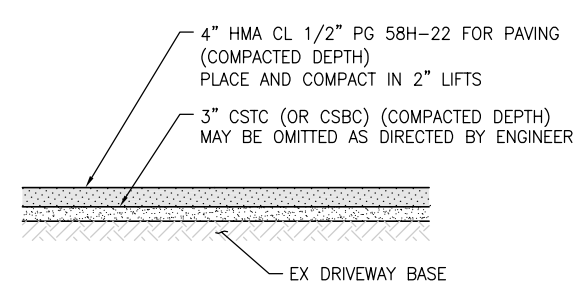


- NOTE:
PERFORATIONS SHALL BE PLACED FACING DOWN TO PREVENT CLOGGING AND MAXIMIZE WATER COLLECTION.

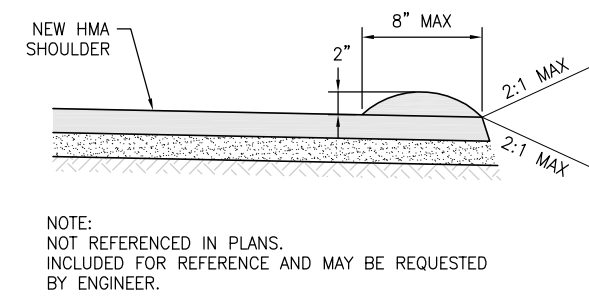
3 PVC PERF PIPE
NTS



4 TYPICAL PAVEMENT REPAIR
NTS

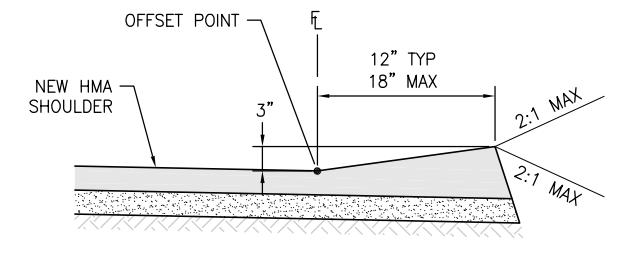


5 HMA DRIVEWAY
NTS

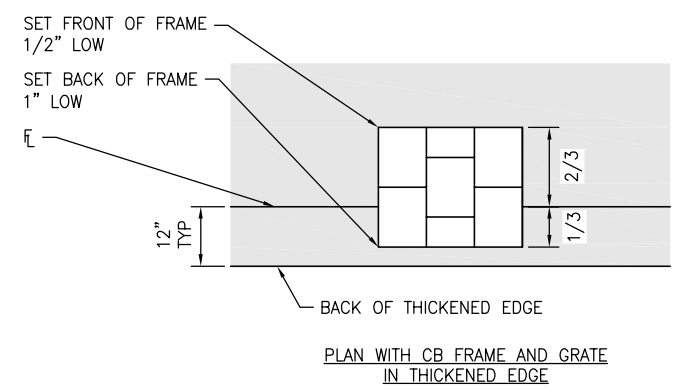
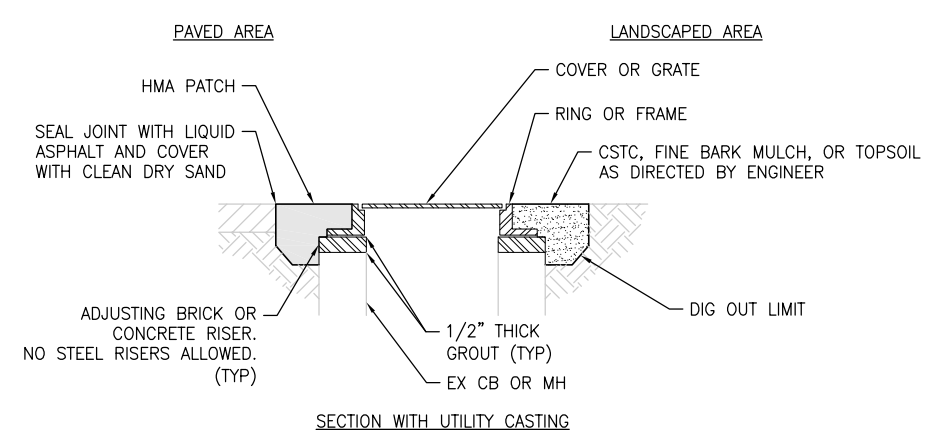


- NOTE:
NOT REFERENCED IN PLANS.
INCLUDED FOR REFERENCE AND MAY BE REQUESTED BY ENGINEER.

6 HMA BERM
NTS



7 HMA THICKENED EDGE
NTS



8 TYPICAL UTILITY ADJUSTMENT
NTS

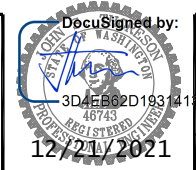
- NOTES:
1. ASPHALT PERIMETER SHALL EXTEND 2" BELOW ADJUSTMENT RINGS.
 2. UTILITIES WITH CONCRETE RINGS AROUND STRUCTURE SHALL HAVE CONCRETE REMOVED AND REPLACED WITH HMA PER THIS DETAIL.
 3. ADD OR REMOVE BRICK AND/OR RISERS TO ACHIEVE REQUIRED FINISHED RIM ELEVATION.
 4. CATCH BASINS IN THE FLOWLINE SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO PAVING UNLESS DIRECTED BY THE ENGINEER.
 5. MANHOLES, VALVE BOXES, AND MONUMENTS SHALL BE ADJUSTED TO FINISH GRADE AFTER PAVING.

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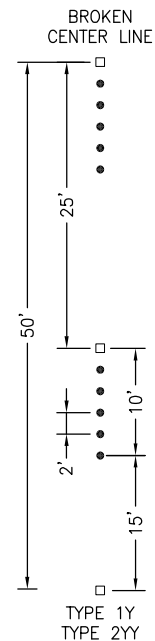


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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3

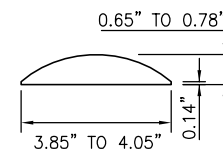
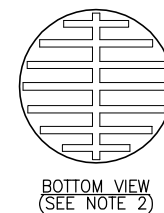
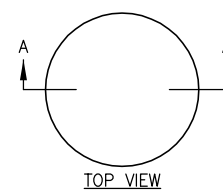
DETAILS

PROJECT NO.	22-01
SCALE	NONE
SHEET	18 OF 19

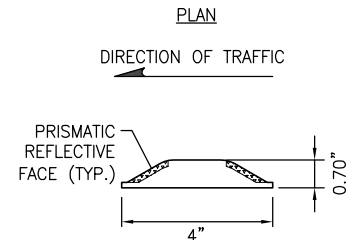
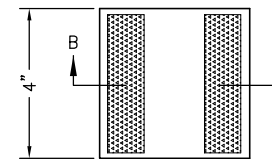


- TYPE 1 RAISED PAVEMENT MARKER
- TYPE 2 RAISED PAVEMENT MARKER

TYPE 2 RPM RAISED FACE COLORS	
TYPE 2YY	YELLOW AND YELLOW
TYPE 2W	WHITE—ONE SIDE ONLY
TYPE 2WW	WHITE—ONE SIDE ONLY
TYPE 1 RPM COLORS	
TYPE 1W	WHITE
TYPE 1Y	YELLOW



TYPE 1



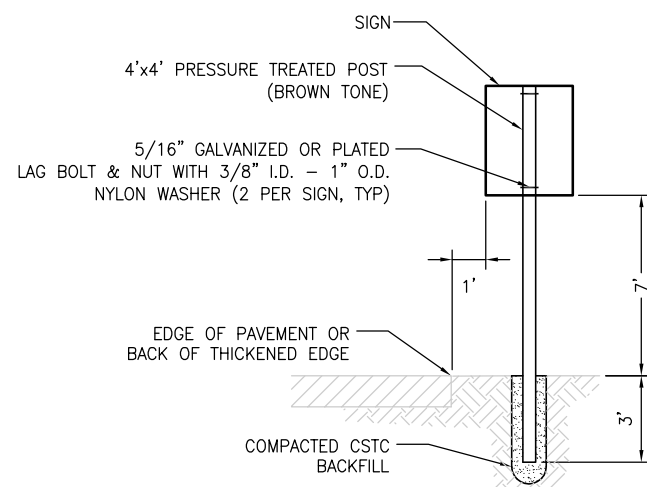
TYPE 2

GENERAL NOTE:
ALL MARKERS INSTALLED ON HMA PAVEMENTS SHALL BE INSTALLED WITH BITUMINOUS ADHESIVE, CRAFCO STANDARD PAVEMENT MARKER ADHESIVE. SEE SPECIFICATION SECTION 9-02.1(8) AND 8-09.

- TYPE 1 NOTES:**
- TYPE 1 MATERIAL-MARKER SHALL BE MOLDED OF A HIGH IMPACT, RECYCLED ACRYLONITRILE BUTADIENE STYRENE (ABS),
 - MARKER BOTTOM SHALL ALLOW UPWARD FLOW OF ADHESIVE AND VENTING TO PREVENT AIR ENTRAPMENT.

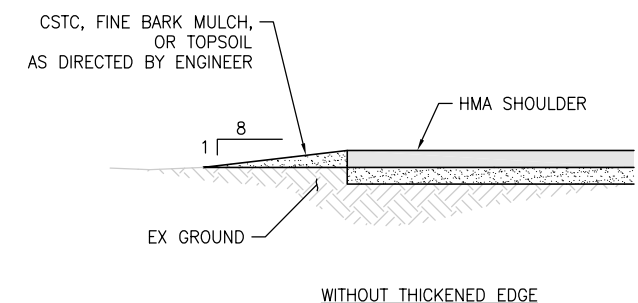
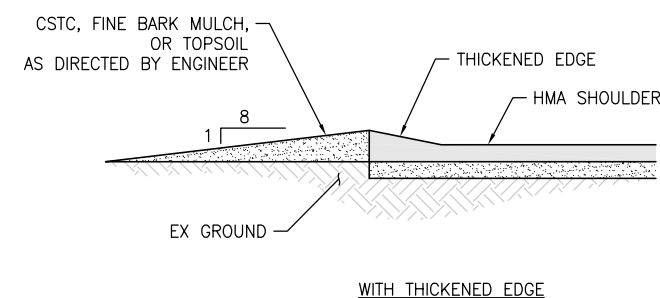
- TYPE 2 NOTES:**
- RAISED PAVEMENT MARKERS TYPE 2 SHALL BE STIMSONITE C80 OR APPROVED EQUAL.
 - SUBSTITUTE PAVEMENT MARKERS SHALL NOT BE ACCEPTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER, PRIOR TO THE INSTALLATION.

1 **RAISED PAVEMENT MARKERS**
NTS



NOTES:
SIGN SHALL BE ATTACHED WITH TOP EDGE OF SIGN FLUSH WITH TOP OF POST.

2 **SIGN INSTALLATION**
NTS

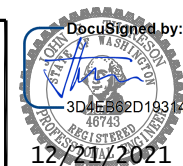


3 **EDGE RESTORATION**
NTS



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CITY OF MERCER ISLAND
ROADSIDE SHOULDER IMPROVEMENTS
WEST MERCER WAY PHASE 3
DETAILS

PROJECT NO.	22-01
SCALE	NONE
SHEET	19 OF 19