Submittals

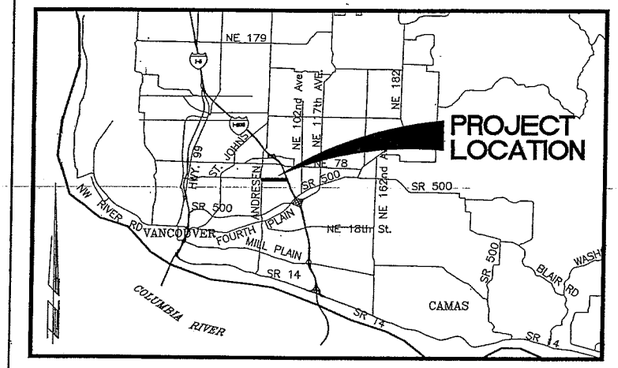
CAPITAL IMPROVEMENTS PROGRAM

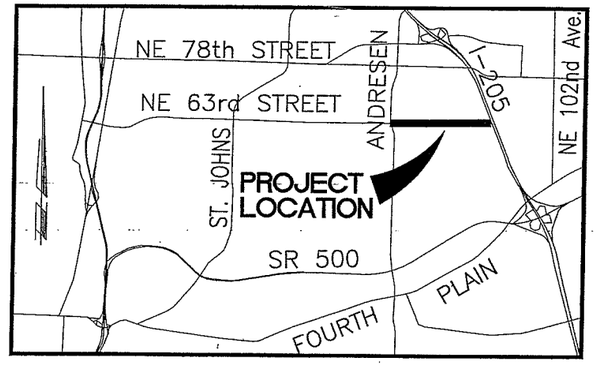
N.E. 63RD STREET IMPROVEMENTS

FROM ANDRESEN ROAD TO INTERSTATE 205

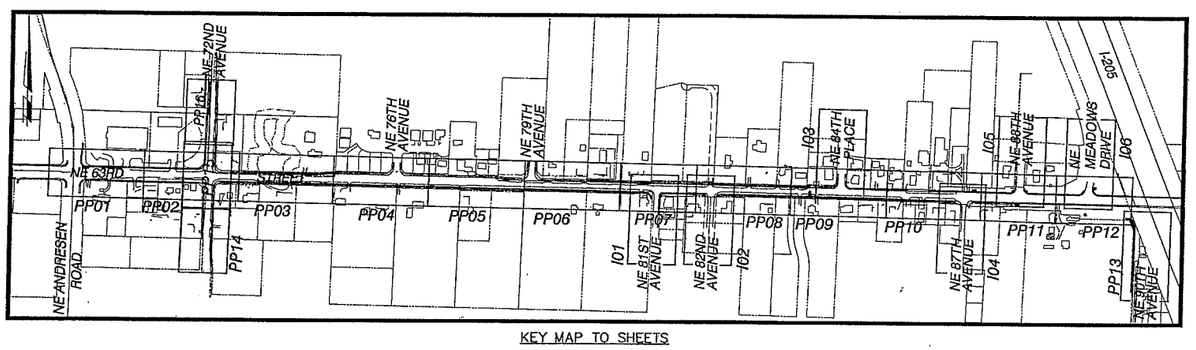
COUNTY ROAD PROJECT # 330422

PLANS FOR THE CONSTRUCTION OF ROADWAYS, STORM DRAINAGE, WATERLINE, AND SANITARY SEWER





VICINITY MAPS



KEY MAP TO SHEETS

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(NOT INCLUDED)

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72	U05	CITY OF VANCOUVER PLAN/PROFILE – NE 63rd ST. STA 53+00 TO STA 58+00
73	U06	CITY OF VANCOUVER PLAN/PROFILE – NE 63rd ST. STA 58+00 TO STA 62+00
74	U07	CITY OF VANCOUVER PLAN/PROFILE – NE 63rd ST. STA 62+00 TO STA 67+00
75	U08	CITY OF VANCOUVER PLAN/PROFILE – NE 63rd ST. STA 67+00 TO STA 72+00
76	U09	CITY OF VANCOUVER PLAN/PROFILE – NE 63rd ST. STA 72+00 TO STA 77+00
77	U10	CITY OF VANCOUVER PLAN/PROFILE – NE 63rd ST. STA 77+00 TO STA 81+00
78	U11	CITY OF VANCOUVER PLAN/PROFILE – NE 63rd ST. STA 81+00 TO STA 85+25
79	U12	CITY OF VANCOUVER PLAN/PROFILE – NE 72nd AVE. STA 18+00 TO STA 21+50
80	U13	CITY OF VANCOUVER PLAN/PROFILE – NE 72nd AVE. STA 21+50 TO STA 25+00
81	U14	CITY OF VANCOUVER PLAN/PROFILE – NE 72nd AVE. STA 25+00 TO STA 28+50

COMMISSIONERS:

BETTY SUE MORRIS, Chair
MARC BOLDT, Commissioner
STEVE STUART, Commissioner

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CLARK COUNTY UTILITIES COORDINATING COUNCIL

proud past, promising future
CLARK COUNTY WASHINGTON

DEPARTMENT OF PUBLIC WORKS

DESIGN AND ENGINEERING DIVISION - DESIGN SECTION

PAMELA KIEL WIEDEMANN
STATE OF WASHINGTON
22440
REGISTERED PROFESSIONAL ENGINEER
EXPIRES: AUG. 31, 2005

otak Incorporated
700 Washington Street
Suite 401
Vancouver, WA 98660-3139
Phone: (360) 737-9613
FAX: (360) 737-9651

99% SUBMITTAL - MARCH 11, 2005
NOT FOR CONSTRUCTION

Quality Assurance	Project Manager	Director of Public Works
Tom Grange, P.E. DATE:	Robin Washington DATE:	Peter Capell, P.E. DATE:

ENG 2004-00121

proud past, promising future
CLARK COUNTY WASHINGTON

Recommended for Approval

Grading _____ Erosion _____

Storm Water Plan _____

Development Review Manager _____ Date

V: JOHNMA 06/28/04 3:13pm ---> R:\DWG\C9445001.DWG

XREF: LD1
Ltscale: 1
Resolved
C978X001
PKW

LINE LEGEND

- PROPOSED ROW LINE
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED PERMANENT WALL EASEMENT
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB AND GUTTER (TYPE A-1)
- PROPOSED CENTER LINE
- PROPOSED STORM DRAIN PIPE
- F — F — PROPOSED FILL LIMITS
- C — C — PROPOSED CUT LIMITS
- x — x — PROPOSED FENCE LINE
- PROPOSED SAWCUT LINE
- PROPOSED RETAINING WALL
- EXISTING ROW/PROPERTY LINE
- EXISTING EASEMENT
- EXISTING EDGE OF PAVEMENT
- EXISTING CURB LINE
- EXISTING CENTER LINE
- X — X — EXISTING FENCE LINE
- T — T — EXISTING TELEPHONE LINE
- W — W — EXISTING WATER LINE
- E — E — EXISTING UNDERGROUND ELECTRIC
- SS — SS — EXISTING SANITARY SEWER LINE
- SD — SD — EXISTING STORM DRAINAGE
- G — G — EXISTING GAS LINE
- OHL — OHL — EXISTING OVERHEAD POWERLINE
- EXISTING CULVERT
- EXISTING DITCH CENTER LINE
- EXISTING GUARDRAIL
- EXISTING BRUSH LINE
- EXISTING HEDGE
- EXISTING WETLAND BOUNDARY LINE
- EXISTING WETLAND BUFFER LINE

GENERAL NOTES

1. SURVEY DATUM PER CLARK COUNTY.
2. EXISTING UTILITIES SHOWN ON THE PLANS ARE PER SURFACE LOCATIONS, RECORD DRAWINGS, AND LIMITED POTHOLE DATA. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
3. ALL NECESSARY CONSTRUCTION SURVEY SHALL BE PROVIDED AT NO COST TO THE CONTRACTOR. HOWEVER, THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLACING NEEDED SURVEY STAKES DESTROYED THROUGH NORMAL OPERATIONS, NEGLIGENCE, OR INATTENTION.
4. AT THE END OF EACH WORK DAY THE CONTRACTOR SHALL CLEAN UP THE PROJECT AREA AND LEAVE IT IN A NEAT AND SECURED MANNER. UPON COMPLETION, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.
5. THE CONTRACTOR SHALL PRUNE ALL VEGETATION, AS APPROVED, AWAY AND UP FROM THE STREET AS WELL AS ANY ROOT PRUNING AS DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.
6. ALL ROADWAY STATIONS ARE BASED UPON THE CONSTRUCTION CENTERLINE, WHICH IS REFERENCED TO THE RECORD OF SURVEY (R.O.S.) CENTERLINES.
7. IF EXISTING CONCRETE CURBS AND SIDEWALKS DESIGNATED TO REMAIN ARE DAMAGED THEY WILL BE REMOVED AND REPLACED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
8. AT A MINIMUM, THE CONTRACTOR IS TO MAINTAIN ALTERNATING ONE WAY TRAFFIC UNLESS APPROVED TRAFFIC CONTROL PLAN ALLOWS OTHERWISE.
9. CONTRACTOR TO NOTIFY THE C-TRAN OPERATION CHIEF, 72 HOURS PRIOR TO CONSTRUCTION NEAR ANY C-TRAN FACILITY.
10. CONTRACTOR TO COORDINATE UTILITY RELOCATIONS WITH CLARK PUBLIC UTILITIES FOR POWER, QWEST FOR TELEPHONE, N.W. NATURAL FOR GAS, COMCAST FOR CABLE TV, THE CITY OF VANCOUVER AND HAZEL DELL SEWER DISTRICT FOR SANITARY SEWER AND THE CITY OF VANCOUVER FOR WATER.
11. CONTRACTOR SHALL PROTECT EXISTING WATER SERVICE LINES. ALL DISTURBED WATER SERVICE LINES SHALL BE REPAIRED AS DIRECTED. ALL RELOCATED METERS WILL BE RESET IN ACCORD WITH CITY OF VANCOUVER STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF EXISTING WATER SERVICE LINES DESTROYED THROUGH NEGLIGENCE AND/OR INATTENTION.
12. CONTRACTOR TO MAINTAIN INGRESS AND EGREES FROM THE FIRE STATION AND ALL PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.
13. STREET AND PLANTER STRIP DIMENSIONS SHOWN FROM FACE OF CURB ON PLAN AND PROFILE SHEETS.
14. ALL WATER AND SANITARY SEWER WORK TO BE CONSTRUCTED PER THE LATEST EDITION OF CITY OF VANCOUVER STANDARDS NOTES AND DETAILS.

BENCHMARKS–CLARK COUNTY DATUM

DESCRIPTION	STATION	OFFSET	ELEVATION
SURVEY CONTROL POINT #10200 5/8" IRON ROD WITH RED PLASTIC CAP, "CONTROL 22689"	STA. 28+87.26	61.70' LT	268.50
SURVEY CONTROL POINT #153 3-5/8" BRASS DISK IN CONCRETE	STA. 49+68.06	0.00' LT	285.73
SURVEY CONTROL POINT #10203 P.K. NAIL WITH BRASS WASHER	STA. 51+19.68	17.96' LT	287.23
SURVEY CONTROL POINT #154 3-5/8" BRASS DISK IN CONCRETE	STA. 66+23.48	0.00' LT	266.71
SURVEY CONTROL POINT #155 TACK IN LEAD IN CONCRETE WALK	STA. 86+49.07	24.61' RT	254.66

SYMBOLS LEGEND

- PROPOSED MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED CURB INLET (CI)
- PROPOSED COMBINATION CURB INLET (CCI)
- PROPOSED FLOW-SPLITTER MH
- PROPOSED DRYWELL
- PROPOSED STORMWATER TREATMENT VAULT
- PROPOSED FIRE HYDRANT
- W PROPOSED WATER METER
- PROPOSED WATER VALVE
- EXISTING TRANSFORMER
- EXISTING ELEC TOWER
- EXISTING FIRE HYDRANT
- CL EXISTING CLEAN OUT
- G EXISTING GAS VALVE
- W EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING SIGNAL POLE
- T EXISTING TELEPHONE VAULT
- TV EXISTING CABLE TV BOX
- G EXISTING GAS LOCATOR PIPE
- EXISTING CURB OPENING INLET (CI)
- EXISTING CATCH BASIN (CB)
- EXISTING STORM MH OR DRYWELL
- SAN EXISTING SANITARY SEWER
- EXISTING SHRUB
- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- EXISTING SIGN
- J EXISTING J BOX
- T EXISTING TELEPHONE MANHOLE
- EXISTING LIGHT
- EXISTING GUY ANCHOR
- EXISTING UTILITY POLE
- EXISTING MAIL BOX
- T EXISTING TELEPHONE JUNCTION BOX
- EXISTING SPRINKLER HEAD
- TRAVERSE POINT
- TEST HOLE

FOR LANDSCAPE SYMBOLS
SEE DRAWING L01

PATTERN LEGEND

- PROPOSED PCC SIDEWALK AND DRIVEWAYS
- PROPOSED CONCRETE DRIVEWAY APPROACH
- NEW A.C. PAVEMENT DRIVEWAY RECONSTRUCTION
- PROPOSED CURB RAMP PER CLARK COUNTY DETAILS, SEE SHEET D01
- EXISTING BUILDING

NOTE SYMBOLS

- 1XX EXISTING SANITARY MANHOLE (SEE SHT. S03)
- 2XX EXISTING STORM DRAIN STRUCTURE (SEE SHT. S03)
- SD# PROPOSED STORM DRAIN STRUCTURE NOTE
- MH# PROPOSED STORM DRAIN MANHOLE NUMBER
- CB# PROPOSED CATCH BASIN/CURB INLET NUMBER
- XX CURB NUMBER
- XX ROAD CENTERLINE CURVE DATA
- X CONSTRUCTION NOTE

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY:
- CONTRACTOR
- CITY/COUNTY FORCES
- OTHERS

DESIGNED:	PKW
DRAWN:	SLW
CRP:	330422
HORIZ.	NA
VERT.	NA
DATE:	3/11/2005
DWG.	S01

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PAMELA L. WILDEMANN
STATE OF WASHINGTON
23440
REGISTERED PROFESSIONAL ENGINEER

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Vancouver, WA 98660
Phone: (360) 737-8013

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

GENERAL NOTES, LEGENDS AND BENCHMARKS

NOT FOR CONSTRUCTION

proud past, promising future
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WASHINGTON

XX/XX

REF LIST
tscale: 1
esolved
KW WASH
944x001_border

SUMMARY OF QUANTITIES

ITEM #	UNIT	TOTAL QUANTITY	DESCRIPTION
			PART 1 – ROADWAY AND STORM DRAINAGE
1	L.S.	1	MOBILIZATION
2	CALC.	1	MINOR CHANGE
			TRAFFIC CONTROL
3	HOUR	2,500	TRAFFIC CONTROL LABOR
4	HOUR	750	TRAFFIC CONTROL SUPERVISOR
5	L.S.	1	TEMPORARY TRAFFIC CONTROL DEVICES
6	S.F.	250	CONSTRUCTION SIGN CLASS "A"
7	S.F.	72	INSTALL PROJECT IDENTIFICATION SIGN
			PREPARATION
8	L.S.	1	CLEARING AND GRUBBING
9	EACH	100	TREE REMOVAL, 12 INCH DIAM. AND LARGER
10	EST.	1	ROADSIDE CLEANUP
11	L.S.	1	REMOVAL OF STRUCTURE AND OBSTRUCTION
12	L.S.	1	REMOVAL OF BUILDINGS (7103 NE 63RD STREET)
13	L.S.	1	REMOVAL OF BUILDINGS (6214 NE 72ND AVENUE)
14	EST.	1	REMOVAL OF HAZARDOUS MATERIALS – EQUITABLE ADJUSTMENT
			GRADING
15	C.Y.	23,050	ROADWAY EXCAVATION, INCLUDING HAUL
16	C.Y.	8,000	ENBANKMENT COMPACTION
17	C.Y.	7,000	STORMWATER FACILITY GRADING INCLUDING EXCAVATION AND HAUL
18	MGAL.	500	WATER
19	S.Y.	9,000	CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION
20	S.Y.	-----	DITCH EXCAVATION (INCLUDING HAUL)
21	L.S.	-----	OPEN CELL SYSTEM AND POROUS PAVERS
			BASES
22	TON	22,700	CRUSHED SURFACING BASE COURSE
23	S.Y.	160	GRAVEL ACCESS ROAD
			HOT MIX ASPHALT
24	TON	5,950	HMA CL 1/2" PG 64–22
25	TON	6,000	HMA CL 3/4" PG 64–22
26	L.F.	800	SAWCUT EXISTING ASPHALT PAVEMENT
27	S.Y.	40	HMA CL 1/2" PG 64–22 RAMP
28	S.Y.	1,900	HMA FOR APPROACH CL 1/2" PG 64–22
			MINOR STRUCTURES
29	S.F.	650	MODULAR BLOCK RETAINING WALL
30	S.F.	12,350	MSE RETAINING WALL
31	L.F.	1,300	VINYL COATED CHAIN LINK FENCE TYPE 6, BLACK FOR MODULAR BLOCK WALL
			MANHOLES, DRAINAGE STRUCTURE, STORM SEWER
32	L.F.	7,364	TRENCH SAFETY SYSTEM
33	L.F.	1,102	STORM SEWER PIPE, 10 IN. DIAM.
34	L.F.	180	DUCTILE IRON STORM SEWER PIPE, 10 IN. DIAM.
35	L.F.	830	STORM SEWER PERF PIPE, 12 IN. DIAM. W/ INFILTRATION TRENCHING
36	L.F.	3,309	STORM SEWER PIPE, 12 IN. DIAM.
37	L.F.	15	STORM SEWER PIPE, 15 IN. DIAM.
38	L.F.	350	REINFORCED CONCRETE STORM SEWER PIPE, 15 IN. DIAM.
39	L.F.	532	REINFORCED CONCRETE STORM SEWER PIPE, 18 IN. DIAM.
40	L.F.	824	STORM SEWER PIPE, 24 IN. DIAM.
41	L.F.	222	REINFORCED CONCRETE STORM SEWER PIPE, 24 IN. DIAM.
42	EACH	2	MANHOLE, 48 IN DIAM. TYPE 1
43	EACH	18	MANHOLE, 48 IN DIAM. TYPE 3
44	EACH	2	MANHOLE, 60 IN DIAM. TYPE 1
45	EACH	5	MANHOLE, 60 IN DIAM. TYPE 3
46	EACH	3	CB TYPE 2, 60 IN. DIAM. W/ MH LID AND FLOW SPLITTER
47	EACH	9	PRECAST CONCRETE DRYWELL, 48 IN DIAM.
48	EACH	1	PRECAST CONCRETE DRYWELL, 48 IN DIAM. WITH GRATED LID
49	L.S.	1	STANDARD PRECAST STORMFILTER™ UNIT – VAULT C6, 6 FT. x 12 FT.
50	L.S.	1	STANDARD PRECAST STORMFILTER™ UNIT – VAULT E9, 6 FT. x 12 FT.
51	L.S.	1	STANDARD PRECAST STORMFILTER™ UNIT – VAULT F24, 6 FT.
52	EACH	2	STORMFILTER™ TWO CARTRIDGE CATCH BASIN
53	EACH	1	CATCH BASIN, TYPE 1
54	EACH	30	CURB INLET
55	EACH	18	COMBINATION CURB INLET
56	EACH	5	DITCH INLET
57	EACH	9	ADJUST MANHOLE, METHOD 1
58	EACH	9	ADJUST MANHOLE, METHOD 2
59	EACH	3	CONNECTION TO DRAINAGE STRUCTURE
60	EACH	20	ADJUST GAS VALVE, READER COVER OR FRAME
61	EACH	--	LOW PROFILE DISCHARGE
62	EACH	--	OUTLET CONTROL MANHOLE, 72 IN. DIAM.
63	EACH	--	EMERGENCY OVERFLOW MANHOLE, 48 IN. DIAM.
			EROSION CONTROL AND PLANTING
64	HOUR	100	ESC LEAD
65	ACRE	1.75	SEEDING AND MULCHING
66	ACRE	0.60	SEEDING AND MULCHING FOR STORMWATER FACILITY
67	L.F.	11,100	SILT FENCE
68	L.F.	600	ORANGE CONSTRUCTION FENCE
69	EACH	66	INLET PROTECTION
70	S.F.	175	OPEN CELL MASONRY GRID
71	EACH	1	CONSTRUCTION ENTRANCE
72	EACH	1	TIRE WASH
73	EACH	1	EROSION CONTROL AND SPILL PREVENTION REINSPECTION FEE
74	EACH	1	SPCC PLAN
75	C.Y.	820	TOPSOIL, TYPE A
76	EACH	45	PSIPE – 2 IN. CALIPER TREE (PAPERBACK MAPLE)
77	EACH	80	PSIPE – 1.5 IN. CALIPER TREE (AMERICAN HORNBEAM)
78	EACH	210	PSIPE – SHRUB, 2 GAL.
79	EACH	2,670	PSIPE – GROUNDCOVER, 1 GAL.
80	L.S.	1	LANDSCAPING FOR STORMWATER FACILITY
81	C.Y.	275	BARK MULCH, 4–IN. DEPTH

SUMMARY OF QUANTITIES

ITEM #	UNIT	TOTAL QUANTITY	DESCRIPTION
			PART 1 – ROADWAY AND STORM DRAINAGE
			OTHER
82	L.F.	11,560	CEMENT CONCRETE TRAFFIC CURB AND GUTTER, TYPE A–1
83	L.F.	200	CEMENT CONCRETE CURB, TYPE E–1
84	L.F.	250	EXTRUDED CURB (TYPE 6)
85	S.Y.	1,100	CEMENT CONCRETE APPROACH 3 DAY
86	S.Y.	26	CEMENT CONCRETE APPROACH 3 DAY, WITH #4 REBAR
87	S.Y.	165	CEMENT CONCRETE DRIVEWAY
88	EACH	116	TREE ROOT BARRIER (20 LF PER STREET TREE)
89	L.F.	730	VINYL COATED CHAIN LINK FENCE, TYPE 1, BLACK
90	EACH	1	16' WIDE CHAIN LINK GATE, TYPE 1, BLACK
91	EACH	10	ADJUST SURVEY MONUMENT CASE AND COVER
92	S.Y.	6,950	CEMENT CONCRETE SIDEWALK
93	S.Y.	100	THICKENED CEMENT CONCRETE SIDEWALK
94	EACH	30	DETECTABLE WARNING PATTERN
95	EACH	35	MAILBOX SUPPORT, TYPE 1
96	EACH	5	MAILBOX SUPPORT, TYPE 2
			ILLUMINATION, SIGNALS, ELECTRICAL AND SIGNAGE
97	L.S.	1	TRAFFIC SIGNAL SYSTEM INSTALLATION – 63RD/72ND
			PERMANENT SIGNING
98	L.F.	1	REMOVING PAINT LINE

SUMMARY OF QUANTITIES

ITEM #	UNIT	TOTAL QUANTITY	DESCRIPTION
			PART 2 – CITY OF VANCOUVER WATER AND SANITARY SEWER
99	L.S.	1	MOBILIZATION
100	L.S.	1	MINOR CHANGE
			TRAFFIC CONTROL
101	HOUR	1,500	TRAFFIC CONTROL LABOR
102	HOUR	500	TRAFFIC CONTROL SUPERVISOR
103	L.S.	1	TEMPORARY TRAFFIC CONTROL DEVICES
			SANITARY SEWER
104	L.F.	1,262	TRENCH SAFETY SYSTEM
105	L.F.	276	TRENCH EXCAVATION, BACKFILL AND COMPACTION (LESS THAN 10 FT DEEP)
106	L.F.	898	TRENCH EXCAVATION, BACKFILL AND COMPACTION (10 FT TO 12 FT DEEP)
107	TON	875	SELECT GRANULAR BACKFILL (IMPORT)
108	L.F.	1,114	PVC SEWER PIPE AND BEDDING, 8 IN DIAM.
109	L.F.	70	PVC SEWER PIPE LATERAL, 8 IN DIAM.
110	L.F.	78	PVC SEWER PIPE LATERAL, 6 IN DIAM.
111	EACH		PVC SEWER WYE, 8 IN DIAM.
112	EACH		LATERAL CONNECTION TO MAINLINE
113	EACH	3	SANITARY MANHOLE, LESS THAN 10 FT. DEEP)
114	EACH	1	SANITARY MANHOLE, 10 FT. TO 14 FT. DEEP)
115	EACH	1	SANITARY MANHOLE, 14 FT. TO 16 FT. DEEP)
116	EACH	1	OUTSIDE DROP MANHOLE CONNECTION
117	EACH	4	CLEANOUT
			WATER MAINS
118	L.F.	1,960	TRENCH SAFETY SYSTEM
119	L.F.	230	12 IN. CL. 52 D.I. MAIN
120	L.F.		10 IN. CL. 52 D.I. MAIN
121	L.F.		8 IN. CL. 52 D.I. MAIN
122	L.F.	235	6 IN. CL. 52 D.I. MAIN
123	EACH	8	12 IN./10 IN. x 8 IN. TAP AND SLEEVE
124	EACH	5	10 IN. x 6 IN. TAP AND SLEEVE
125	EACH	2	10 IN. x 8 IN. MJ TEE
126	EACH	1	12 IN. x 8 IN. MJ TEE
127	EACH	1	6 IN. x 6 IN. MJ TEE
128	EACH	2	10 IN. MJ 90 ELBOW
129	EACH	4	10 IN. MJ 45 ELBOW
130	EACH	2	10 IN. MJ 11 1/4 ELBOW
131	EACH	1	12 IN. x 10 IN. MJ CROSS
132	EACH	1	8 IN. MJ CROSS
133	EACH	1	10 IN. x 6 IN. MJ REDUCER
134	EACH	4	8 IN. MJ CAP
135	EACH	4	6 IN. MJ CAP
136	EACH	3	10 IN. x 8 IN. MJ GATE VALVE
137	EACH	2	10 IN. MJ BUTTERFLY VALVE
138	EACH	8	8 IN. TAPPING VALVE
139	EACH	5	6 IN. TAPPING VALVE
140	EACH	10	TEMPORARY BLOWOFF VALVE
141	EACH	19	THRUST BLOCKS
142	EACH	5	NEW FIRE HYDRANT ASSEMBLY
143	EACH	4	ADJUST FIRE HYDRANT TO FINISH GRADE
144	EACH	2	RELOCATE FIRE HYDRANT
145	EACH	8	CONNECT TO EXISTING WATERLINE
146	EACH	27	RELOCATE EXISTING SERVICE
147	EACH	1	REMOVE EXISTING SERVICE
148	EACH	5	TRANSFER EXISTING SERVICE
149	EACH	17	ADJUST WATER VALVE BOX

FOR INFORMATION ONLY

DESIGNED:	PKW
DRAWN:	SLW
CRP:	330422
HORIZ.	NA
VERT.	NA
DATE:	3/11/2005
DWG:	S02

CALL 48 HOURS BEFORE YOU DIG 1–800–424–5555 "It's the Law" NORTHWEST UTILITIES

PAMELA J. WIELEMANN STATE OF WASHINGTON 22440 PROFESSIONAL ENGINEER

otak Incorporated
700 Washington St., Suite 401
Vancouver, WA 98660
Phone: (360) 695-6879

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

SUMMARY OF QUANTITIES

NOT FOR CONSTRUCTION

proud past, promising future
CLARK COUNTY WASHINGTON

VAN: GRANTE 03/02/2005 10:10am ---> R:\DWG\C944S003.DWG

EXISTING CATCH BASIN AND MANHOLE TABLES

SHEET PP01

EXISTING CATCH BASIN TABLE

202 CATCH BASIN
RIM= 268.53
IE OUT= 267.63 (8" SW)

EXISTING MANHOLE TABLE

101 SAN MH
RIM= 267.33
IE= 258.33 (8" E PVC)
IE= 258.33 (8" W PVC)
IE= 258.33 (8" N PVC)

201 STORM MH
RIM= 269.52
IE= 261.02 (18" E CMP)
IE= 261.02 (18" W CPP)
IE= 261.02 (18" N CMP)
(HALF FULL WITH SILT)
IE= 261.02 (18" S CMP)
(HALF FULL WITH SILT)

203 STORM MH
RIM= 266.41
IE IN= 261.31 (18" E)
IE IN= 261.31 (18" S)
IE OUT= 261.31 (18" W)

SHEET PP04

EXISTING CATCH BASIN TABLE

205 CATCH BASIN
RIM= 269.99
IE OUT= 266.99 (10" S)

207 CATCH BASIN
RIM= 281.18
IE OUT= 278.18 (10" W)

EXISTING MANHOLE TABLE

102 SAN MH
RIM = 279.60
IE= 268.00 (8" N)

204 STORM MH
RIM= 270.20
IE IN= 266.70 (10" N)
IE OUT= 266.50 (12" E)

206 STORM MH
RIM= 279.26
IE IN= 274.36 (10" E)
IE IN= 265.26 (12" W)
IE OUT= 265.26 (10" N)

SHEET PP05

EXISTING MANHOLE TABLE

104 SAN MH
RIM= 287.01
IE IN= 279.41 (8" E)
IE OUT= 279.41 (8" N)

105 SAN MH
RIM= 287.41
IE OUT= 280.11 (8" E)

SHEET PP07

EXISTING CATCH BASIN TABLE

209 CATCH BASIN
RIM= 272.96
IE OUT= 269.48 (8" N)

EXISTING MANHOLE TABLE

106 SAN MH
RIM= 274.63
IE IN= 266.43 (8" 2)
IE OUT= 266.43 (8" E)

208 STORM DRYWELL
RIM= 272.97
IE IN= 268.37 (8" S)

SHEET PP08

EXISTING MANHOLE TABLE

107 SAN MH
RIM= 271.29
IE IN= 264.19 (8" W)
IE OUT= 264.19 (8" E)

108 SAN MH
RIM= 268.05
IE IN= 261.65 (8" W)
IE OUT= 261.65 (8" E)

SHEET PP09

EXISTING CATCH BASIN TABLE

211 CATCH BASIN
RIM= 266.93
IE OUT= 264.33 (8" S)

EXISTING MANHOLE TABLE

109 SAN MH
RIM = 270.12
IE IN = 259.72 (8" E)
IE IN= 259.72 (8" W)
IE = 259.72 (8" S)
IE = 259.72 (8" N)

210 STORM DRYWELL
RIM = 266.83
IE IN = 262.63 (8" N)

SHEET PP10

EXISTING CATCH BASIN TABLE

213 CATCH BASIN
RIM= 262.68
IE OUT= 260.38 (12" W)

215 CATCH BASIN
RIM= 260.48
IE OUT= 258.68 (8" SW)

EXISTING MANHOLE TABLE

110 SAN MH
RIM= 276.55
IE IN= 260.75 (8" W)
IE OUT= 260.75 (8" E)

111 SAN MH
RIM= 272.43
IE OUT= 261.63 (8" W)

212 STORM MH
RIM= 263.74
IE IN= 12" E)

214 STORM MH
RIM= 263.15
IE IN= 258.55 (8" NE)

SHEET PP11

EXISTING CATCH BASIN TABLE

216 CATCH BASIN
RIM= 254.85
IE OUT= 250.25 (15" N)

217 CATCH BASIN
RIM= 254.94
IE OUT= 253.04 (8" W)

218 CATCH BASIN
RIM= 254.69
IE OUT= 250.99 (15" S)

SHEET PP12

EXISTING CATCH BASIN TABLE

219 CATCH BASIN
RIM= 257.42
IE OUT= 254.42 (8" NE)
IN IE= 193.16 (12"S)
IN IE= 193.26 (12"N)

220 CATCH BASIN
RIM= 257.01
IE IN= 2253.21 (8" SW)
IE OUT= 253.21 (8" E)

221 CATCH BASIN
RIM= 258.02
IE OUT= 256.42 (8" SE)

222 CATCH BASIN
RIM= 257.60
IE IN= 253.80 (8" NW)
IE OUT= 253.80 (8" S)

SHEET PP14

EXISTING CATCH BASIN TABLE

224 CATCH BASIN
RIM= 281.64
IE OUT= 277.54 (10" W)

EXISTING MANHOLE TABLE

223 STORM DRYWELL
RIM= 281.99
IE IN= 276.99 (10" E)
IE IN= 276.99 (12" S)

225 STORM DRYWELL
RIM= 285.27
IE IN= 276.77 (12" N)

SHEET I01

EXISTING CATCH BASIN TABLE

227 CATCH BASIN
RIM= 277.82
IE OUT= 275.72 (8" E)

228 CATCH BASIN
RIM= 279.14
IE OUT= 275.64 (8" W)

EXISTING MANHOLE TABLE

226 STORM MH
RIM= 279.83
IE IN= 275.73 (8" E)
IE IN= 275.73 (8" W)
IE OUT= 275.73 (12" S)

SHEET I02

EXISTING CATCH BASIN TABLE

230 CATCH BASIN
RIM= 268.22
IE IN = 266.22 (6" W)

231 CATCH BASIN
RIM= 268.39
IE OUT = 266.49 (6" E)

SHEET I03

EXISTING MANHOLE TABLE

109 SAN MH
RIM = 270.12
IE IN = 259.72 (8" E)
IE IN= 259.72 (8" W)
IE = 259.72 (8" S)
IE = 259.72 (8" N)

NOT FOR CONSTRUCTION

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

EXISTING CATCH BASIN AND MANHOLE TABLES

DESIGNED: SLW
DRAWN: GME
CRP: 330422
HORIZ. NA
VERT. NA
DATE: 3/11/2005
DWG: S03

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PAMELA K. EDEMANN STATE OF WASHINGTON 22440 REGISTERED PROFESSIONAL ENGINEER

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Vancouver, WA 98660
Phone: (360) 737-8073

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XREF LIST
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Resolved
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PKW WASH

V: SHERYL 08/24/04 6:09pm ---> V:\PROJECT\11900\11944\DWG\C944S004.DWG

XREF LIST
Ltscale: 200
Resolved
C944x001_border
C944x500
PKW WASH

GENERAL NOTES:

1. CONTRACTOR TO INSTALL NEW MONUMENT BOXES AT ALL PUBLIC INTERSECTIONS

SCALE IN FEET
200 0 200 400

CURVE TABLE

NUMBER	DELTA ANGLE	TANGENT	RADIUS	ARC LENGTH	CHORD LENGTH
C1	37°59'21"	240.96	700.00	464.13	455.67

NOT FOR CONSTRUCTION

V: SHERYL 08/24/04 6:10pm ---> V:\PROJECT\11900\11944\DWG\C944S004.DWG

DESIGNED: SLW
DRAWN: JRM
CRP: 330422
HORIZ. 1" = 200'
VERT. NA
DATE: 3/11/2005
DWG: HV1

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555
"It's the Law"
NORTHWEST UTILITIES

otak Incorporated
700 Washington St. Suite 401
Vancouver, WA 98660
Phone: (360) 737-8013

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

NE 63RD STREET
HORIZONTAL CONTROL PLAN

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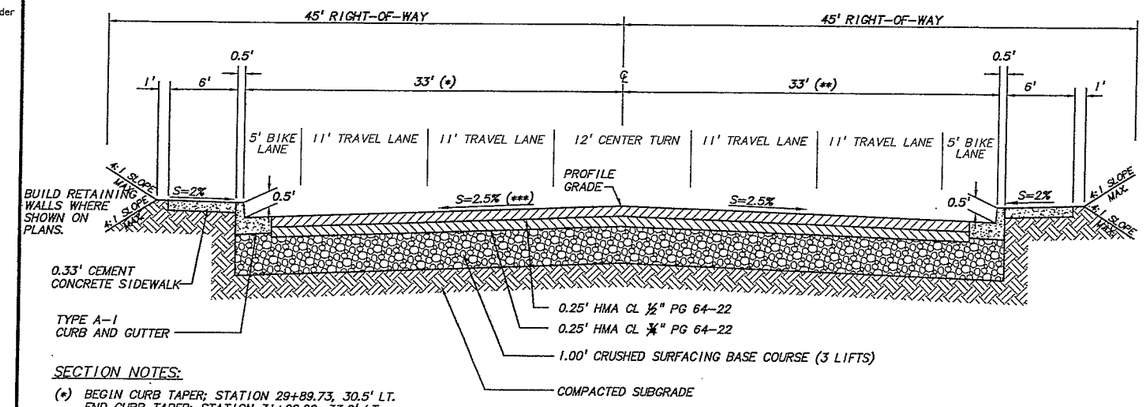
CLARK COUNTY WASHINGTON



SECTION NOTES:

(*) BEGIN CURB TAPER; STATION 29+89.73, 30.5' LT.
END CURB TAPER; STATION 31+00.00, 33.0' LT.

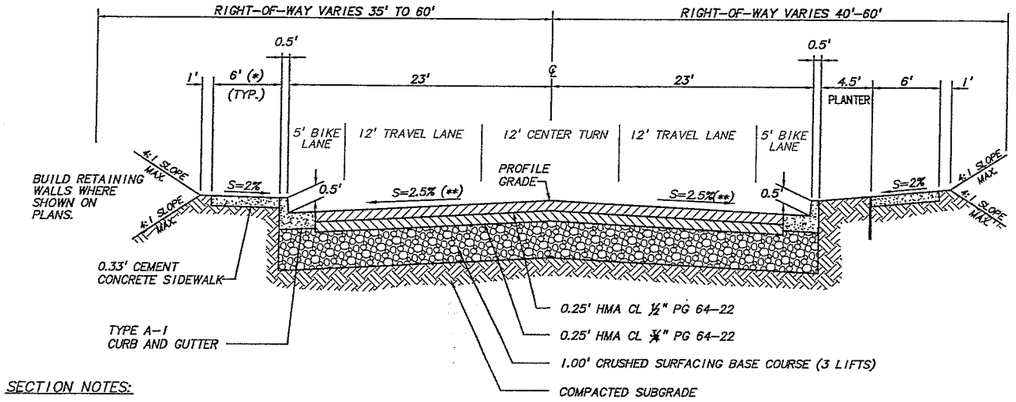
(**) BEGIN CURB TAPER; STATION 29+90.10, 33.5' RT.
END CURB TAPER; STATION 31+00.00, 33.0' RT.

(***) SLOPE VARIES FROM +1.0%(⅟) TO MATCH EXISTING CURB, STATION 29+89.73 TO -2.5% AT STATION 31+00.00

N.E. 63RD STREET

N.T.S.

STATION 29+90 TO 36+45.28



SECTION NOTES:

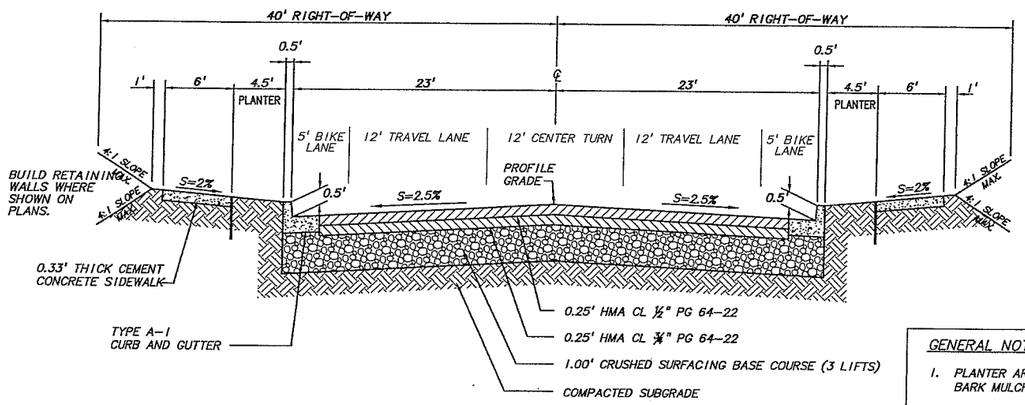
(*) CONSTRUCT 8' SIDEWALK:
STATION 37+03.50 TO STATION 38+10.36 LT
STATION 71+84.40 TO STATION 74+60.18 LT

(**) ADJUST CROSS SLOPES AT 72ND AVE INTERSECTION AS SHOWN ON PLANS

N.E. 63RD STREET

N.T.S.

STATION 36+45.28 TO STATION 38+10.36
STATION 69+08.28 TO STATION 78+85.00

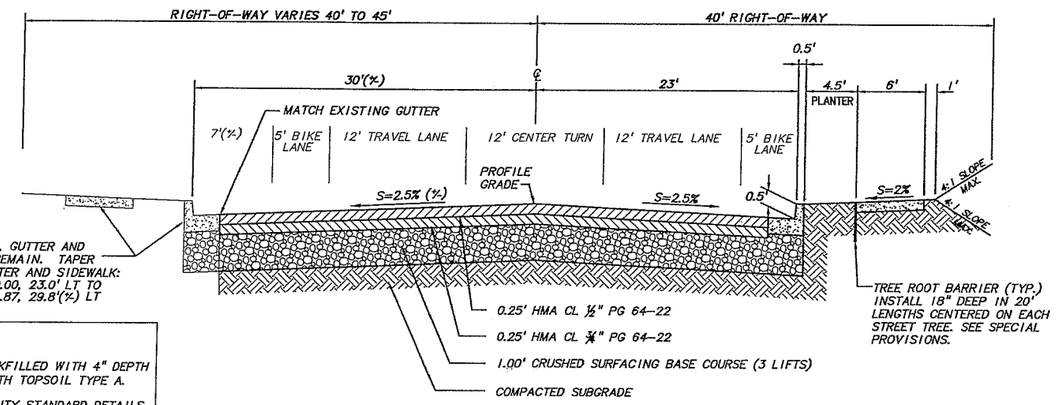


N.E. 63RD STREET

N.T.S.

STATION 38+10.36 TO STATION 42+00.00
STATION 61+79.21 TO STATION 69+08.28

STATION 56+30.00 TO STATION 58+94.27



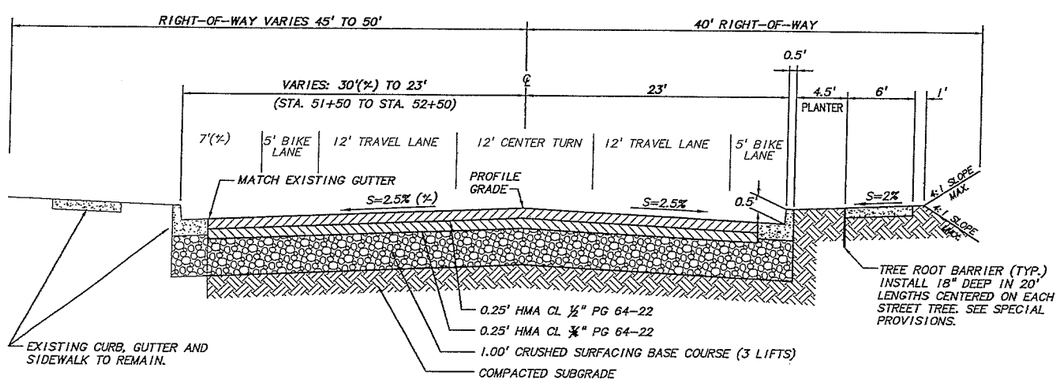
GENERAL NOTES:

1. PLANTER AREAS TO BE BACKFILLED WITH 4" DEPTH BARK MULCH OVER 12" DEPTH TOPSOIL TYPE A.
2. ALL CURBS PER CLARK COUNTY STANDARD DETAILS. SEE SIDEWALK DETAIL, DWG. NO. D02.
3. CONTRACTOR TO MAINTAIN 5' MIN. CLEARANCE IN SIDEWALK AROUND MAILBOXES AND OTHER PERMANENT SIDEWALK OBSTRUCTIONS. SEE DETAIL ON SHEET D01
4. NE 63RD PAVEMENT SECTION TO EXTEND TO END OF CURB RETURNS ON SIDESTREETS

N.E. 63RD STREET

N.T.S.

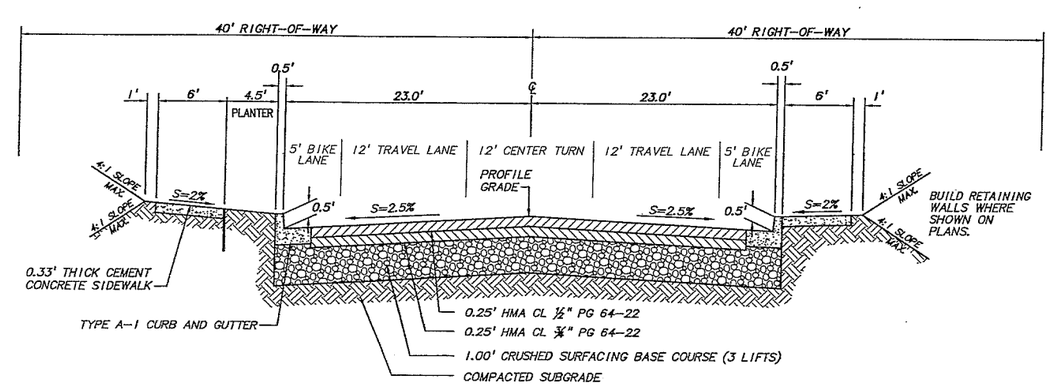
STATION 42+00.00 TO STATION 51+50.00



N.E. 63RD STREET

N.T.S.

STATION 51+50.00 TO STATION 56+30.00



N.E. 63RD STREET

N.T.S.

STATION 58+94.27 TO STATION 61+79.21

DESIGNED: SLW
DRAWN: GWE
CRP: 330422
HORIZ. NA
VERT. NA
DATE: 3/11/2005

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PAMELA K. WITCOMMANN STATE OF WASHINGTON 22140 REGISTERED PROFESSIONAL ENGINEER

otak Incorporated 700 Washington St., Suite 401 Vancouver, WA 98660

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

TYPICAL ROAD SECTIONS

NOT FOR CONSTRUCTION

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CLARK COUNTY WASHINGTON

REF LIST
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KW WASH

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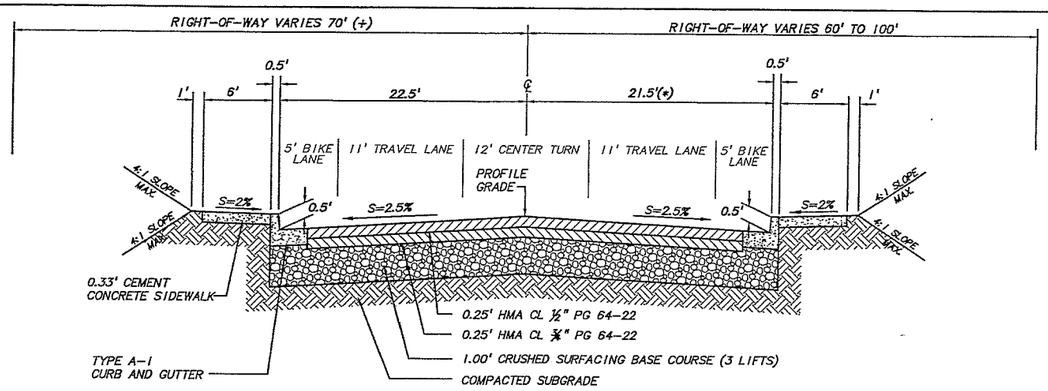


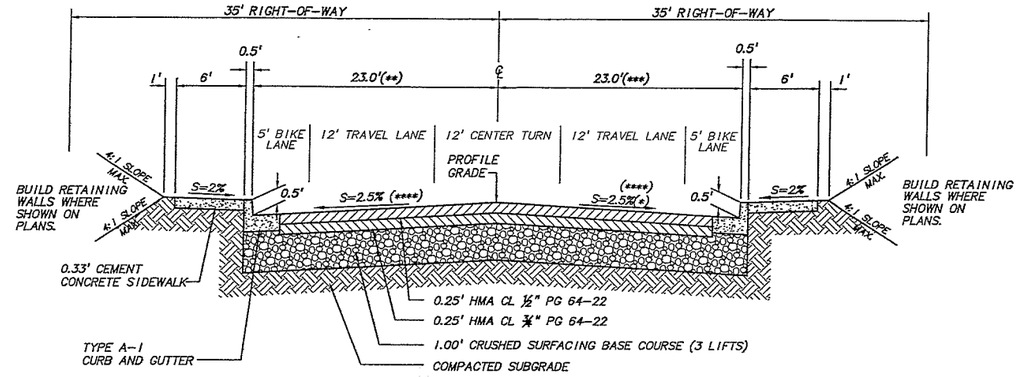
N.E. 63RD STREET

N.T.S.

STATION 78+85.00 TO STATION 85+10.90

SECTION NOTES:

(*) BEGIN CURB TAPER; STATION 78+80.00, 23.0' RT.
END CURB TAPER; STATION 79+30.00, 21.5' RT.



N.E. 72ND AVENUE

N.T.S.

STATION 19+45.00 TO STATION 25+38.40

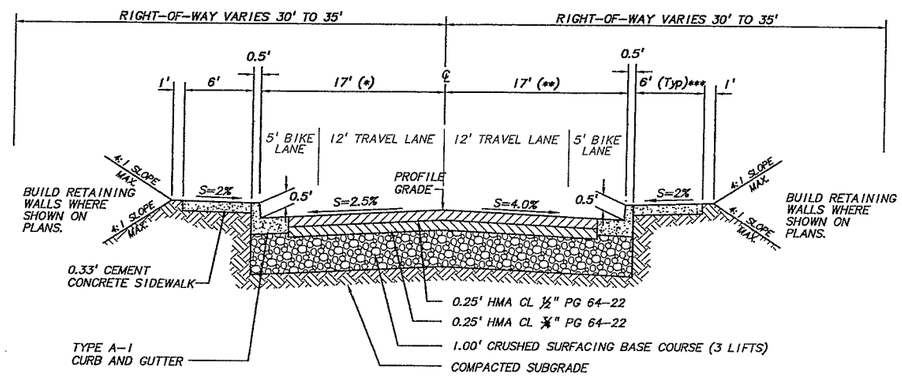
SECTION NOTES:

(*) TRANSITION CROSS SLOPE TO 4.0%
STATION 24+50.00 TO STATION 25+00.00

(**) BEGIN CURB TAPER; STATION 19+85.05, 19.0' LT
END CURB TAPER; STATION 21+03.80, 23.0' LT

(***) BEGIN CURB TAPER; STATION 18+45.55, 28.0' RT
END CURB TAPER; STATION 18+96.80, 23.0' RT

(****) ADJUST CROSS SLOPES AT 63RD STREET
INTERSECTION AS SHOWN ON PLANS



SECTION NOTES:

(*) BEGIN CURB TAPER; STATION 25+38.48 23.0' LT.
END CURB TAPER; STATION 27+18.41, 17.0' LT.

(**) BEGIN CURB TAPER; STATION 25+38.44 23.0' RT.
END CURB TAPER; STATION 27+18.41, 17.0' RT.

(***) CONSTRUCT 8' SIDEWALK:
STATION 25+37.11 TO STATION 27+16.34 RT

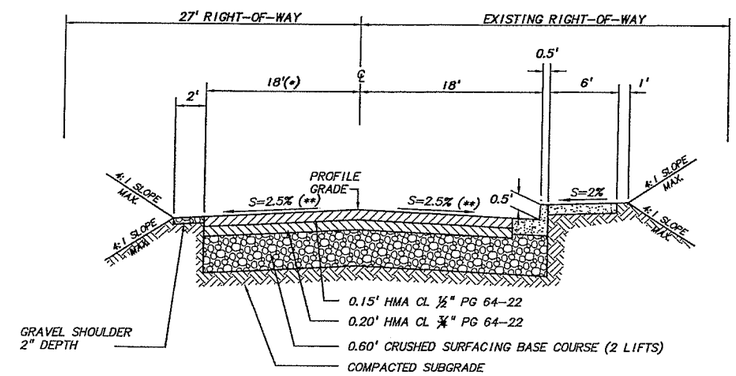
N.E. 72ND AVENUE

N.T.S.

STATION 25+38.40 TO STATION 28+20.00

GENERAL NOTES:

1. PLANTER AREAS TO BE BACKFILLED WITH 4" DEPTH BARK MULCH OVER 12" DEPTH TOPSOIL TYPE A.
2. ALL CURBS PER CLARK COUNTY STANDARD DETAILS. SEE SIDEWALK DETAIL, DWG. NO. D02.
3. CONTRACTOR TO MAINTAIN 5' MIN. CLEARANCE IN SIDEWALK AROUND MAILBOXES AND OTHER PERMANENT SIDEWALK OBSTRUCTIONS. SEE DETAIL ON SHEET D01
4. NE 63RD PAVEMENT SECTION TO EXTEND TO END OF CURB RETURNS ON SIDESTREETS



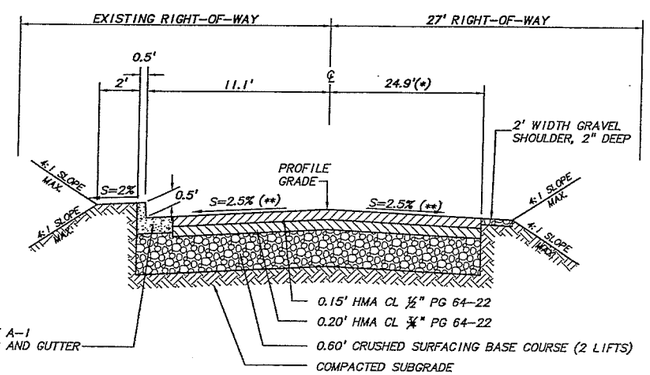
N.E. 81ST AVENUE

N.T.S.

SECTION NOTES:

(*) BEGIN EDGE OF PAVEMENT TAPER; STATION 8+64.84, 7.18' LT.
END EDGE OF PAVEMENT TAPER; STATION 9+41.64, 18.00' LT.

(**) WARP CROSS SLOPES TO MATCH EXISTING
CROSS SLOPES AT STATION 8+75.00



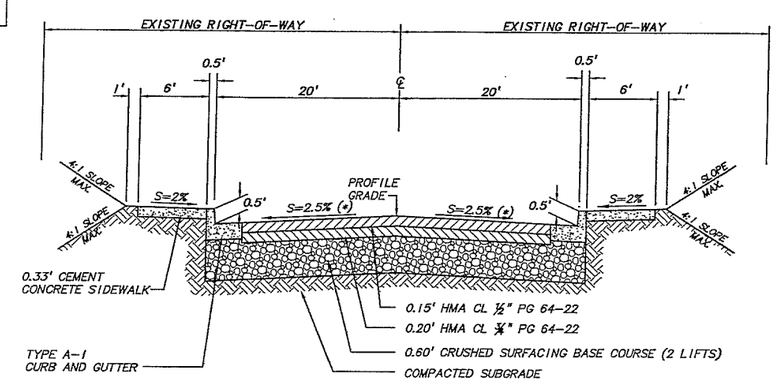
SECTION NOTES:

(*) BEGIN EDGE OF PAVEMENT TAPER; STATION 8+85.22, 8.85' RT.
END EDGE OF PAVEMENT TAPER; STATION 9+42.87, 24.87' RT.

(**) WARP CROSS SLOPES TO MATCH EXISTING
CROSS SLOPES AT STATION 9+00.00

N.E. 87TH AVENUE

N.T.S.



N.E. 88TH AVENUE

N.T.S.

SECTION NOTES:

(*) WARP CROSS SLOPES TO MATCH EXISTING
CROSS SLOPES AT STATION 10+75.00

NOT FOR CONSTRUCTION

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

TYPICAL ROAD SECTIONS

DESIGNED: SLW
DRAWN: GME
CRP: 330422
HORIZ. NA
VERT. NA
DATE: 3/11/2005
DWG: TS2

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STATE OF WASHINGTON
25440
REGISTERED PROFESSIONAL ENGINEER

otak
Incorporated
700 Washington St., Suite 401
Vancouver, WA 98660
Phone: (360) 797-9813

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CLARK COUNTY
WASHINGTON

REF LIST
tscale: 1
resolved
2944x001_border
KW WASH
nresolved
2978X001

V: SHERYL 08/24/04 8:14pm ---> V:\PROJECT\11900\11944\DWG\C9445006.DWG

XREF LIST
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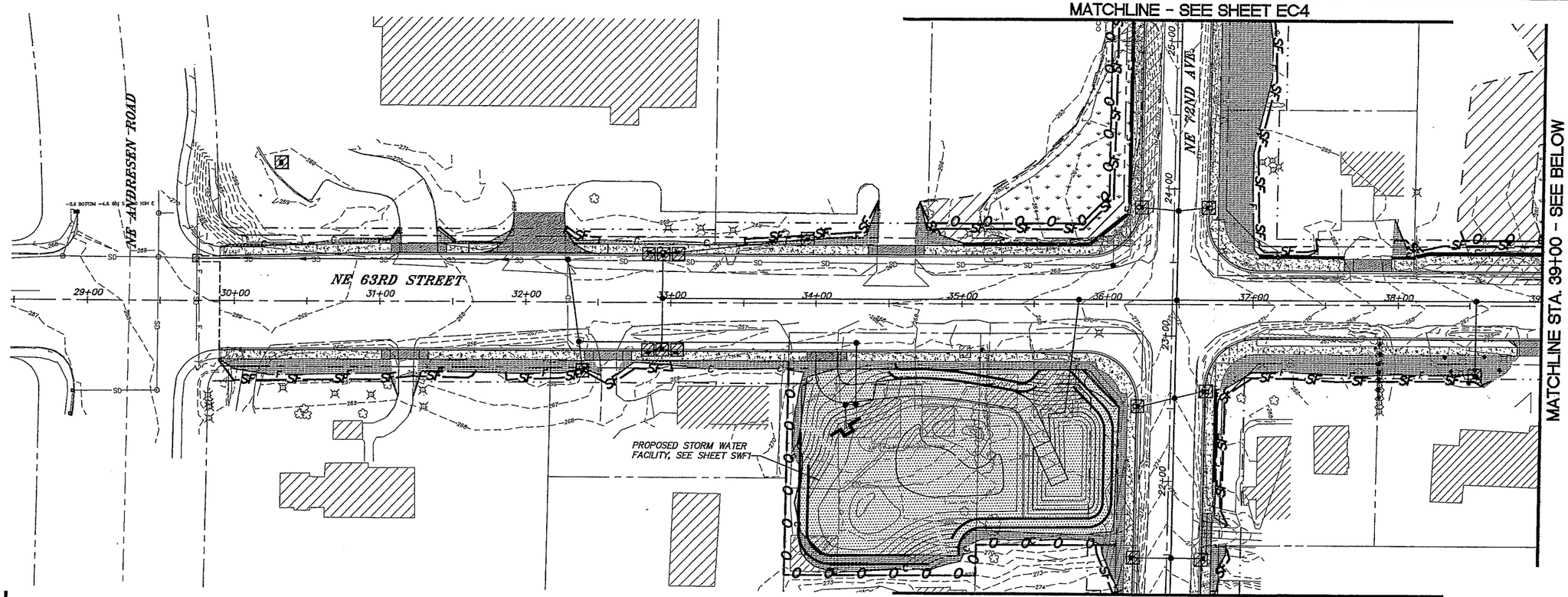

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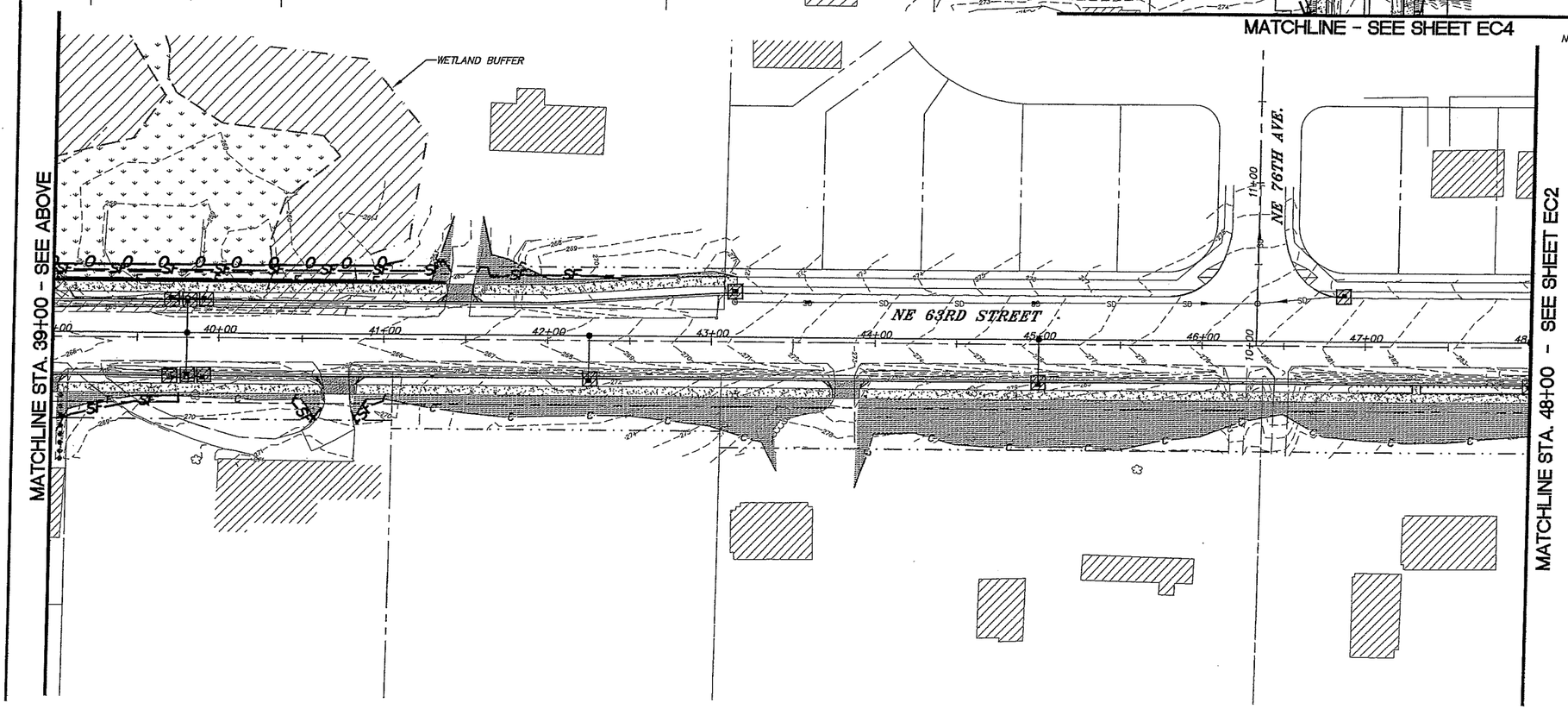

NOTE:
SIGNIFICANT VARIATION AND DEGREE OF EROSION CONTROL EFFORT WILL BE DICTATED BY WEATHER CONDITIONS. THE CONTRACTOR SHOULD BE PREPARED TO PROVIDE EXTRA EROSION CONTROL PROVISIONS AND EFFORT DURING WINTER AND WET WEATHER CONDITIONS BEYOND THAT NORMALLY REQUIRED DURING SUMMER AND DRY WEATHER CONDITIONS. FINE GRAINED AND UNCONSOLIDATED SOILS ON SLOPING SITES MAY BECOME UNSTABLE WHEN SUBJECT TO EXCESSIVE MOISTURE.

EROSION CONTROL LEGEND

- STORM WATER FACILITY SEEDING AND MULCHING: INSTALL NORTH AMERICAN GREEN EROSION CONTROL BLANKET S150 OR EQUAL ON ALL SLOPES 5:1 OR GREATER. APPLY EROSION CONTROL SEEDING AS NOTED BELOW PRIOR TO PLACING BLANKET.
- SEEDING AND MULCHING: RAKE EMBANKMENT TO 1/2 INCH DEPTH TO BREAK SURFACE. HYDROMULCH WITH PROTIME 700 SEED MIX OR EQUAL AT 80 LBS/ACRE, 100% ORGANIC NITROGEN ONLY FERTILIZER AT 70 LBS/ACRE, AND WOOD CELLULOSE FIBER MULCH AT 200 LBS/ACRE.
- INLET PROTECTION SEE DETAIL ON DWG EC5.
- CHECK DAM (STRAW WADDLE OR ROCK)
- SF — SF — SEDIMENT FENCE
- F / C — DAYLIGHT LINE
- O — O — CONSTRUCTION FENCE
- RIPRAP FOR OUTFALL PROTECTION.
- AC DRIVEWAY APPROACH
- NEW SIDEWALK
- EXISTING WETLAND
- WETLAND BUFFER

NOTES:

1. CONTRACTOR TO PROVIDE EROSION CONTROL PROTECTION ON ALL DOWN FLOW INLETS/DITCHS AND PARKING LOT INLETS AS NEEDED OR DIRECTED.
2. SEE PLANS AND SPECIAL PROVISIONS FOR PLANTER STRIP DETAILS.

DESIGNED:	PKW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 40'
VERT.	NA
DATE:	3/11/2005
DWG:	EC1

CALL 48 HOURS BEFORE YOU DIG
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22440
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Incorporated
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DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

EROSION CONTROL PLAN

NOT FOR CONSTRUCTION

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CLARK COUNTY
WASHINGTON

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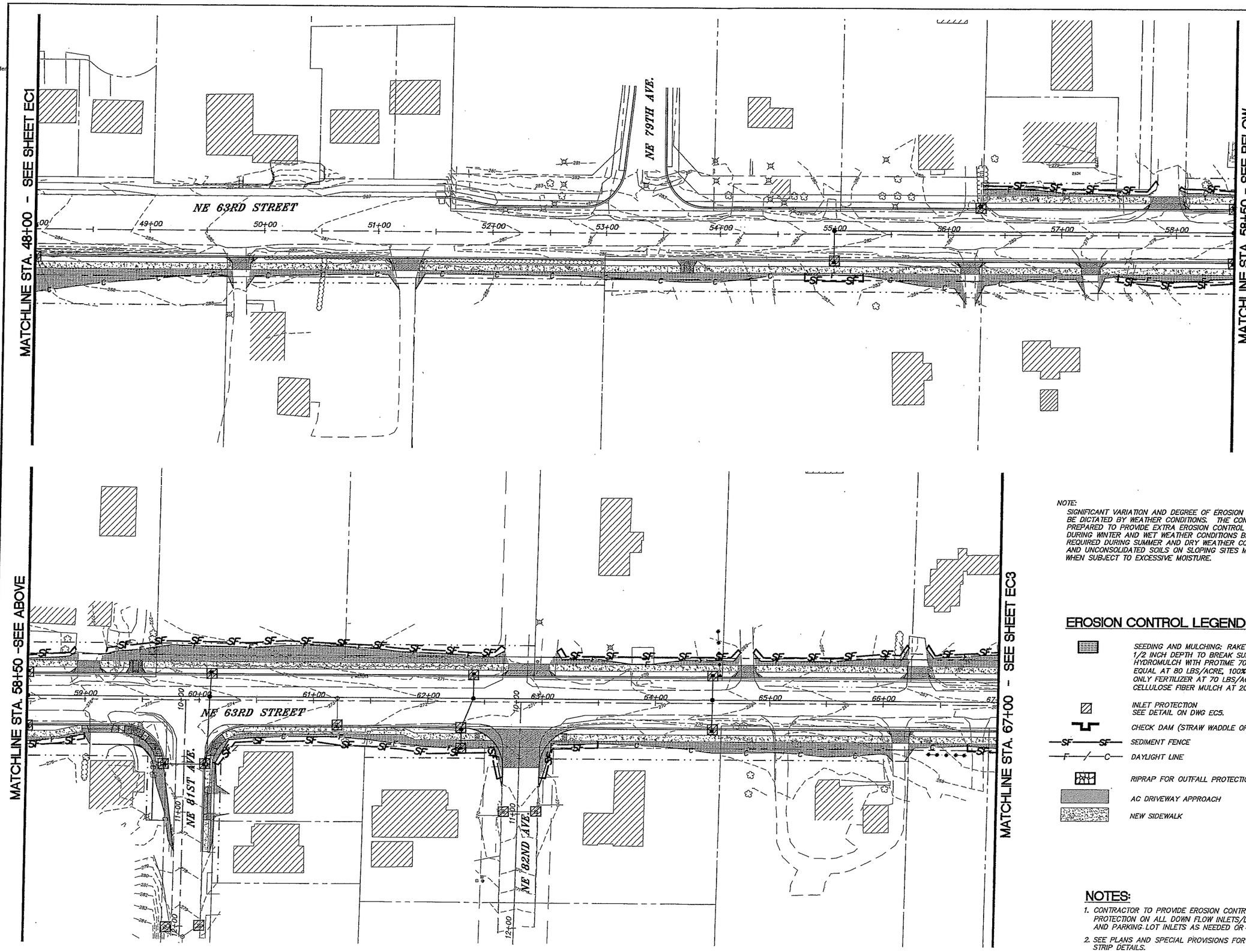

SCALE IN FEET
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NOTE:
SIGNIFICANT VARIATION AND DEGREE OF EROSION CONTROL EFFORT WILL BE DICTATED BY WEATHER CONDITIONS. THE CONTRACTOR SHOULD BE PREPARED TO PROVIDE EXTRA EROSION CONTROL PROVISIONS AND EFFORT DURING WINTER AND WET WEATHER CONDITIONS BEYOND THAT NORMALLY REQUIRED DURING SUMMER AND DRY WEATHER CONDITIONS. FINE GRAINED AND UNCONSOLIDATED SOILS ON SLOPING SITES MAY BECOME UNSTABLE WHEN SUBJECT TO EXCESSIVE MOISTURE.

EROSION CONTROL LEGEND

- SEEDING AND MULCHING: RAKE EMBANKMENT TO 1/2 INCH DEPTH TO BREAK SURFACE. HYDROMULCH WITH PROTIME 700 SEED MIX OR EQUAL AT 80 LBS/ACRE, 100% ORGANIC NITROGEN ONLY FERTILIZER AT 70 LBS/ACRE, AND WOOD CELLULOSE FIBER MULCH AT 200 LBS/ACRE.
- INLET PROTECTION SEE DETAIL ON DWG EC5.
- CHECK DAM (STRAW WADDLE OR ROCK)
- —SF——SF— SEDIMENT FENCE
- —F—/—C— DAYLIGHT LINE
- RIPRAP FOR OUTFALL PROTECTION.
- AC DRIVEWAY APPROACH
- NEW SIDEWALK

NOTES:

1. CONTRACTOR TO PROVIDE EROSION CONTROL PROTECTION ON ALL DOWN FLOW INLETS/DITCHS AND PARKING LOT INLETS AS NEEDED OR DIRECTED.
2. SEE PLANS AND SPECIAL PROVISIONS FOR PLANTER STRIP DETAILS.

DESIGNED:	PKW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 40'
VERT.	NA
DATE:	3/11/2005
DWG:	EC2

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DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

EROSION CONTROL PLAN

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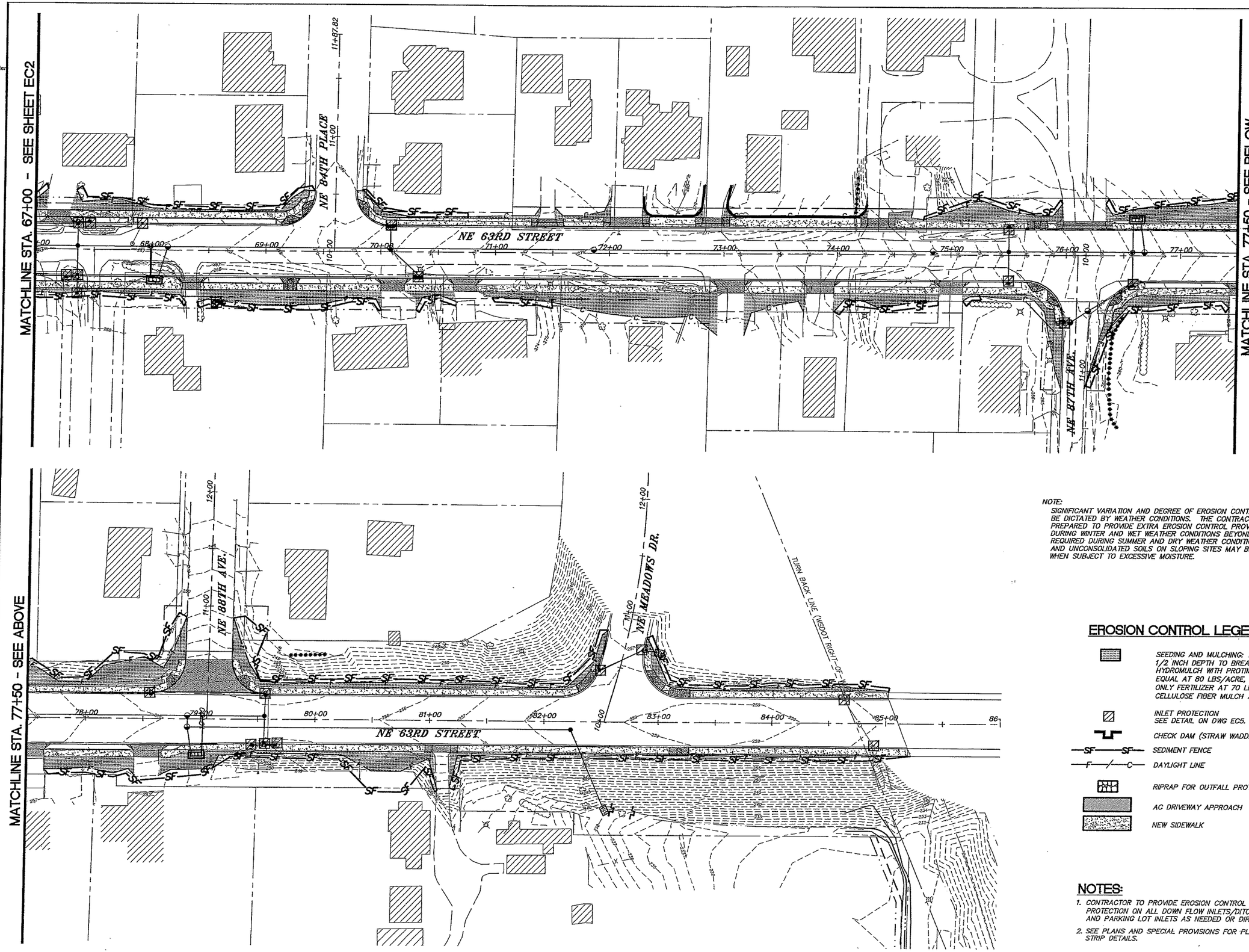

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- CHECK DAM (STRAW WADDLE OR ROCK)
- SF — SEDIMENT FENCE
- F — / — C — DAYLIGHT LINE
- RIPRAP FOR OUTFALL PROTECTION.
- AC DRIVEWAY APPROACH
- NEW SIDEWALK

NOTES:

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2. SEE PLANS AND SPECIAL PROVISIONS FOR PLANTER STRIP DETAILS.

DESIGNED:	PKW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 40'
VERT.	NA
DATE:	3/11/2005
DWG:	FC3

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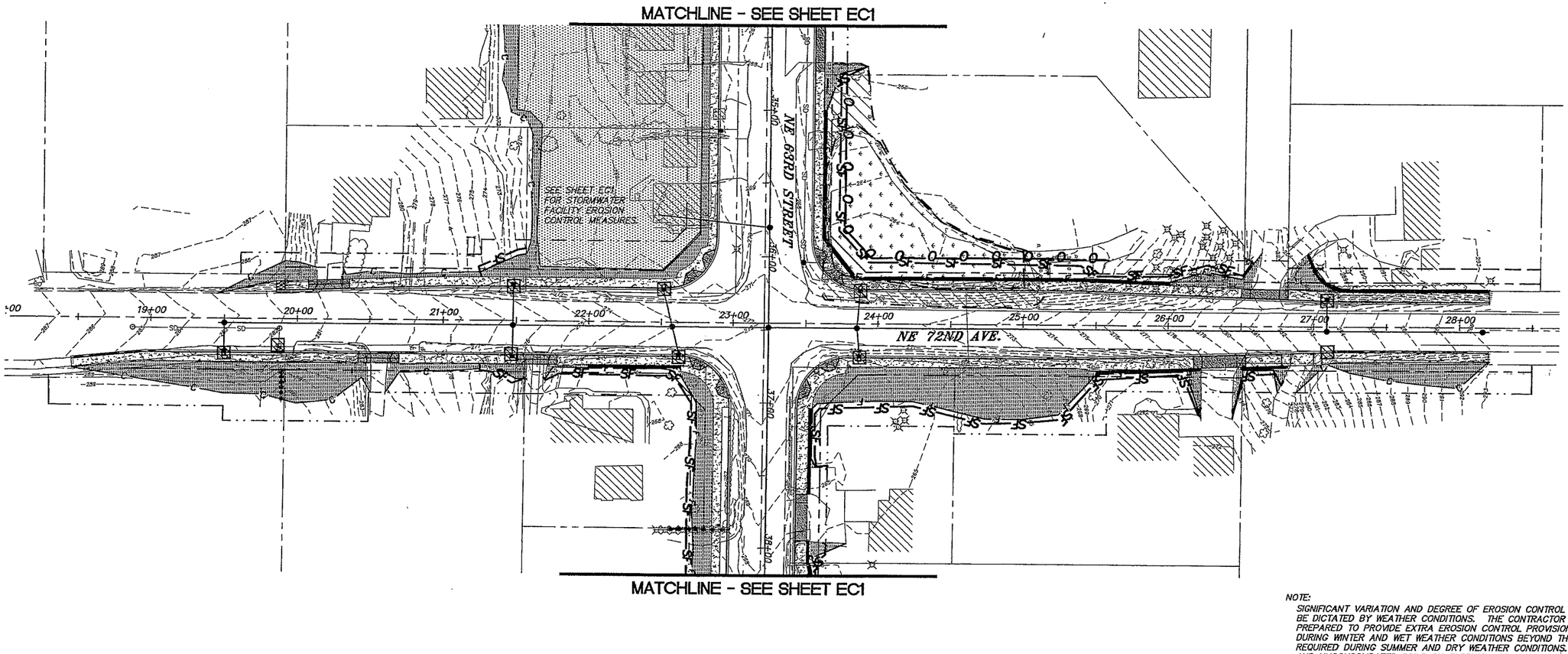

SCALE IN FEET
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- INLET PROTECTION SEE DETAIL ON DWG EC5.
- CHECK DAM (STRAW WADDLE OR ROCK)
- SF — SF — SEDIMENT FENCE
- O — O — CONSTRUCTION FENCE
- F — / — C — DAYLIGHT LINE
- RIPRAP FOR OUTFALL PROTECTION.
- AC DRIVEWAY APPROACH
- NEW SIDEWALK

NOTES:

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2. SEE PLANS AND SPECIAL PROVISIONS FOR PLANTER STRIP DETAILS.

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HORIZ.	1" = 40'
VERT.	NA
DATE:	3/11/2005
DWG	EC4

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EROSION CONTROL PLAN

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STANDARD NOTES FOR EROSION CONTROL PLAN

1. The Contractor shall install and maintain BMP's as shown and perform all actions necessary to prevent erosion, and control sediment from leaving the construction site. Site Contractor shall comply with Clark County Code Chapter 40.380.050.

2. All erosion control measures shall be in-place and in working condition prior to disturbing and exposing any soil surfaces (i.e. silt fence, construction entrance, sedimentation barriers, sedimentation traps).

3. All erosion prevention and control BMP's shall be maintained and repaired as needed to insure continued performance of their intended function. Needed repairs shall be made as soon as practicable. They are to remain in place and operational during all phases of construction. Construction activities shall not continue or resume until repairs to erosion control facilities are made and the facilities are functional. Any sediment leaving the site or discharging to a sensitive area shall be stopped and controlled immediately. Contaminated areas shall be cleaned and restored.

4. Clearing limits and work area limits shall be delineated and marked. Do not disturb more area than needed for construction requirements.

5. All sensitive or critical areas (wetlands, steep slopes, natural waterways), and buffers shall all be clearly delineated and clearly marked, and protected from sediment deposition.
6. Sediment laden runoff shall be prevented from entering all existing storm water catch basins and inlets affected by construction.

7. No exposed, bare soils shall remain unstabilized for more than two days during the period October 1 thru April 30 or for more than seven days during the period of May 1 through September 30. All disturbed soil surfaces shall be stabilized by a suitable application of "Best Management Practices".

8. Where feasible, no more than 500 feet of trench shall be open at one time. Excavated material shall be placed on the up-hill side of trenches provided it does not conflict with safety requirements.

9. Dewatering devices shall discharge into a sediment trap or sediment pond. No discharge shall be made to a paved street or stormwater collection system without first removing sediment.

10. Cut and fill slopes shall be constructed in a manner that will minimize erosion. Erosion shall be controlled and prevented by such measures as roughening the surface, installation of interceptor ditches, terracing, covering with matting, mulch or plastic sheeting. Runoff shall be prevented from entering a slope and from undercutting the base of slopes.

11. Any soil or debris transported onto roadways and sidewalks shall be removed. Deposits shall be completely removed by shoveling and/or sweeping. Washing shall not be utilized unless specifically approved in writing by the County.

12. All permanent infiltration systems shall be isolated and protected from sediment laden runoff entering to avoid risk of reducing the ability of the systems to infiltrate. Isolation and protection shall not be removed until the drainage area tributary to the system is completely stabilized.

CONTINUED ON SHEET 2

NO.	REVISIONS	DATE	BY

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CLARK COUNTY WASHINGTON
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STANDARD NOTES FOR EROSION CONTOL PLAN
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD ECN1 PLAN No.

STANDARD NOTES FOR EROSION CONTROL PLAN (CONTINUED)

13. All conveyance channels, both temporary and permanent shall be stabilized to prevent erosion of the channel. Stabilization shall extend to areas at outlets and downstream reaches vulnerable to erosion resulting from flow discharging from the channel.

14. If BMP's shown are utilized but are insufficient to prevent sediment from reaching water bodies, adjacent properties, or public rights-of-way; additional BMP's shall be implemented immediately to prevent further encroachment of sediment.

15. Stabilized areas shall be provided for employee parking and storage of construction materials. Erodeable stockpiles of earthen materials, such as topsoil, silty and clayey soils; and landscape materials, shall be covered when not being incorporated in the work. Erosion control BMP's shall be utilized as necessary to prevent sediment laden runoff from leaving or sediment being transported from these areas from vehicle activity.

16. All pollutants other than sediment that occur during construction shall be handled and disposed of in a manner that does not cause contamination of storm water.

17. The Contractor shall keep an inspection log of the condition of the erosion control facilities. Erosion control facilities shall be inspected at least weekly and after each rainfall. The inspection log shall be kept at the project site at a designated location and shall be available for review by the County. An individual that has successfully completed the County's Erosion Control Certification course shall perform inspections and maintain the log.

18. All temporary BMP's shall be removed within 30 days after final site stabilization is achieved. Trapped sediment shall be deposited and stabilized on site. Areas disturbed resulting from removal shall be permanently stabilized.

19. Construction shall not be considered complete and acceptable until all disturbed soil surfaces have been protected from erosion with permanent landscaping, covering with impervious surfaces, restored to original undisturbed condition or permanently stabilized.

20. Vegetated stabilization and landscaping shall be fertilized, watered and maintained to insure that growth of vegetation is established and sustained.

21. During dry weather construction periods the contractor shall provide project-specific dust control measures that may include: Seeding, Mulching, Matting, Water, Tackifier, or Chemical Soil Stabilizers. The contractor shall maintain the dust control measures through dry weather periods until all disturbed areas have been stabilized. Immediately re-stabilize areas disturbed by contractor's operations or other activities (wind, water, vandalism, etc.).

22. Entry onto the construction site shall be restricted to a single approved entrance as shown on the plan.

23. Maintenance and repair of heavy equipment and vehicles which involve potential contaminants (oil,solvents,hydraulic fluid, etc.) must be conducted in a manner which prevents contamination of soils, surface water and ground water. Tarps, drip pans, or other appropriate measures shall be used as necessary.

24. Stripping, topsoil, and unsuitable material stockpiles shall be hydroseeded with "regreen wheat x wheat grass hybrid" by Hobbs and Hobkins (or approved equal). Maintenance of stockpile areas and reapplication of hydroseed covering shall be required if bare soil is present. During winter and wet weather conditions, stockpiles shall be covered with plastic sheeting per detail E-16.

SHEET 2 OF 2

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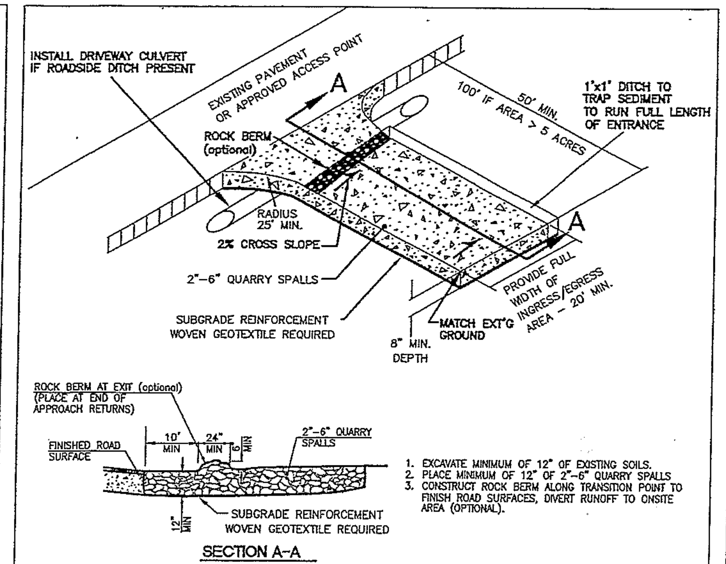
STANDARD NOTES (CONTINUED) FOR EROSION CONTOL PLAN
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD ECN2 — DESIGNED SCH — DRAWN SCH — DATE 07/22/03



SECTION A-A

NOTES:

1. FOR DEVELOPMENT PROJECTS REVIEWED BY ENGINEERING SERVICES. NOT FOR USE WITH SINGLE FAMILY OR DUPLEX RESIDENTIAL BUILDING PERMITS. SEE BUILDING DEPT. FOR GRAVEL CONSTRUCTION ENTRANCE PLAN.
2. INSTALL WOVEN GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.
3. VEHICLE WASHDOWN AREA, IF REQUIRED, IS TO BE INSTALLED AND USED TO REMOVE SEDIMENT FROM VEHICLES THAT ARE ABOUT TO ENTER AN ESTABLISHED ROAD.
4. WASHDOWN AREA TO BE MADE UP OF CLEAN 2"- 6" QUARRY SPALLS, 1" DEEP (MIN) OVER WOVEN GEOTEXTILE FABRIC. WASHDOWN AREA TO BE FULL WIDTH OF ENTRANCE AND 50' (MIN.), AND 100' IF EXPOSED SOIL IS OVER 5 ACRES.
5. AT TIME OF PRECONSTRUCTION MEETING, THE COUNTY INSPECTOR MAY REQUIRE THE ENTRANCE TO BE PAVED TO THE EDGE OF THE RIGHT-OF-WAY PRIOR TO THE INSTALLATION OF A WASHDOWN ENTRANCE TO AVOID DAMAGE TO THE EXISTING ROADWAY.
6. THE RESPONSIBLE EROSION CONTROL INDIVIDUAL IS TO ENSURE THAT ALL VEHICLES USE THIS ENTRANCE AND ARE TO BE INSPECTED AND CLEANED OF SOILS BEFORE LEAVING PROJECT, AND THAT THE ENTRANCE IS TO BE KEPT CLEAN AT ALL TIMES.

NO.	REVISIONS	DATE	BY

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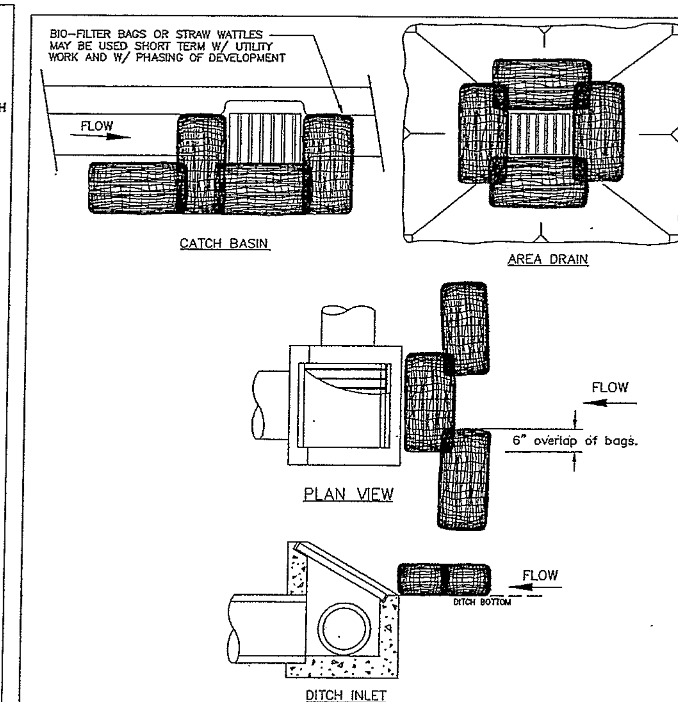
STANDARD CONSTRUCTION ENTRANCE
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD E-1 PLAN No. — DESIGNED SCH — DRAWN SCH — DATE 07/07/03



NOTES:

1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPE.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2" WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. STRAW WATTLES MUST BE STABILIZED BY ATTACHING WIRE CLIPS TO THE CATCH BASIN PER MANUFACTURES SPECIFICATIONS.
4. INLET PROTECTION MUST BE REGULARLY INSPECTED BY THE EROSION CONTROL INDIVIDUAL TO INSURE PROPER PLACEMENT/FUNCTION AND MAINTENANCE.
5. SEE INLET PROTECTION NOTES STD. PLAN E-3

NO.	REVISIONS	DATE	BY

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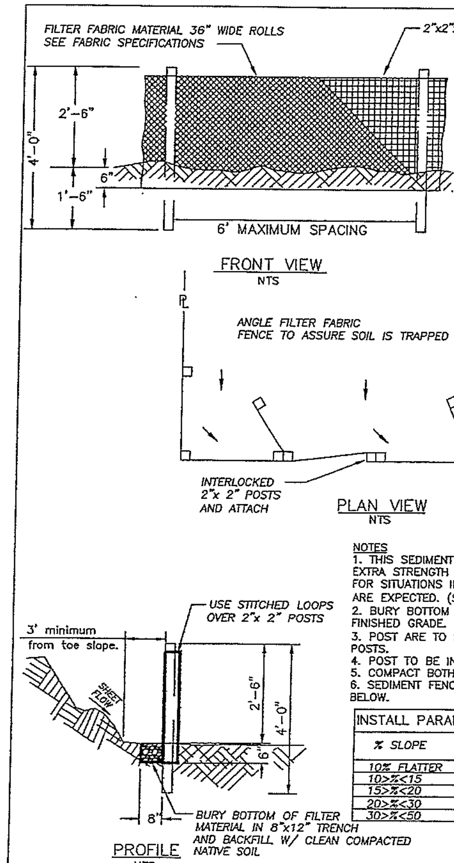
INLET PROTECTION TYPE 4 BIOFILTER BAGS
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD E-3c PLAN No. — DESIGNED SCH — DRAWN SCH — DATE 08/07/02



SEDIMENT FENCE FABRIC SPECIFICATIONS (Woven Polyproylene sediment fence fabric)

PROPERTY	TEST PROCEDURE	MIN. FABRIC VALUE
Grab Tensile Strength	ASTM D-4632	180 lbs.
Grab elongation	ASTM D-4632	15%
trapezoid Tear	ASTM D-4533	70 lbs.
Mullen Burst	ASTM D-3786	300 psi.
Puncture	ASTM D-4833	80 lbs.
Permitivity	ASTM D-4491	0.07 sec-1
Permeability	ASTM D-4491	.005 cm/sec
A.O.S.	ASTM D-4751	50 U.S. Sieve
UV Resistance(500 hrs)	ASTM D-4355	90%

NOTES
1. THIS SEDIMENT BARRIER UTILIZES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS, IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED. (SEE FABRIC SPECIFICATIONS ABOVE)
2. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
3. POST ARE TO BE 2"x2" FIR, PINE OR STEEL FENCE POSTS.
4. POST TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
5. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
6. SEDIMENT FENCE TO BE SPACED ON SLOPES PER TABLE BELOW.

INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	SLOPE	MAX. SPACING ON SLOPE
10% FLATTER	10:1 OR FLATTER	300 ft.
10>%<15	10:1>x<7.5:1	150 ft.
15>%<20	7.5:1>x<5:1	100 ft.
20>%<30	5:1>x<3.5:1	50 ft.
30>%<50	3.5:1>x<2:1	25 ft.

NO.	REVISIONS	DATE	BY

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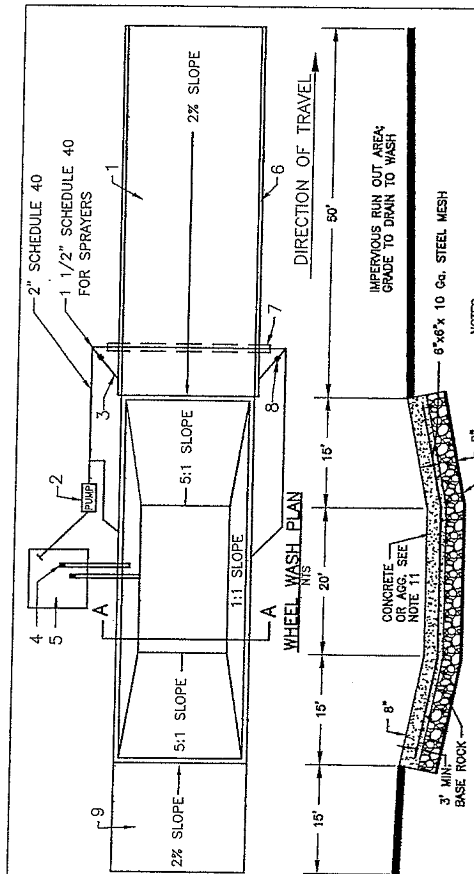
STANDARD SEDIMENT FENCE
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD E-4 PLAN No. — DESIGNED SCH — DRAWN SCH — DATE 07/07/03



NOTES
1. ASPHALT CONSTRUCTION ENTRANCE, 6" OF ATB.
2. 3" TRASH PUMP WITH FLOATS ON SUCTION HOSE.
3. MIDPOINT SPRAY NOZZLES, IF NEEDED.
4. 6" SEWER PIPE WITH BUTTERFLY VALVES. BOTTOM PIPE IS A DRAIN. LOCATE TOP PIPE'S INVERT 1" ABOVE BOTTOM OF WHEEL WASH.
5. 8'x 8' SUMP WITH 5' OF CATCHMENT. BUILD WITH ABILITY TO CLEAN WITH BACKHOE.
6. ASPHALT CURB ON THE LOW ROAD SIDE TO DIRECT WATER BACK TO POND.
7. 6" SLEEVE UNDER ROAD.
8. BALL VALVES.
9. ATB APRON TO PROTECT FROM SPLASHING WATER.
10. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT FROM WHEEL WASH; MAY BE PIPED TO AN APPROVED SEDIMENT TRAP.
11. USE GEOTEXTILE FABRIC WITH AGGREGATE FOR A TEMPORARY WHEEL WASH.

NO.	REVISIONS	DATE	BY

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Department of Public Works
CLARK COUNTY WASHINGTON
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WHEEL WASH
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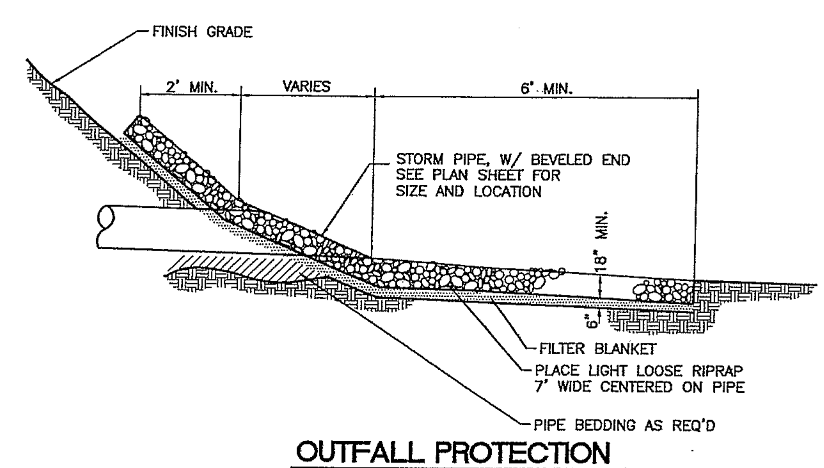
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD E-15 PLAN No. — DESIGNED SCH — DRAWN SCH — DATE 05/12/03



OUTFALL PROTECTION
N.T.S.

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DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

EROSION CONTROL DETAILS AND NOTES

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VERT.	NA
DATE:	3/11/2005
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OPEN CUT UTILITY TRENCH BACKFILL DETAIL (COLLECTOR OR ARTERIAL)

SURFACING:

1. All A.C.P. shall be saw cut to provide a straight, clean edge prior to paving.
2. The cut line shall be one continuous straight line from the outer excavation limits of manhole, valve box, etc. to manhole, valve box, etc.
3. Pave with an 0.5 ft. minimum compacted depth A.C.P., or match existing or design section, whichever is greater.
4. Lifts for A.C.P. (Class A) shall be 0.15 ft. minimum and 0.35 ft. maximum for non-surface lifts (0.25' maximum for surface lift); the temperature shall be 250 degree minimum, 350 degree maximum, compacted to 92% of the theoretical maximum.
5. All joints shall be tacked, sealed and sanded.
6. Trench shall be plated until paved.
7. For longitudinal installation, full lane width including turn lanes restoration shall be required or as directed by Clark County. For transverse installation refer to surfacing restoration of detail U6. See Section 12.20A.120.C.

BASE COURSE:

1. 0.80 ft. minimum depth (1–1/4" minus) C.S.B.C. (W.S.D.O.T. approved material).
2. Compacted to 95% of maximum density. See trench zone.
3. Equivalent depth of A.T.B. may be substituted.
4. For transverse or diagonal trenches in existing roadway pavement, CDF will be used from the bottom of full pavement section to a maximum CDF section of 3 feet or to 6" above the top of the pipe, which ever is less. See note 13 of Std. Plan UGN of this Manual.

TRENCH ZONE:

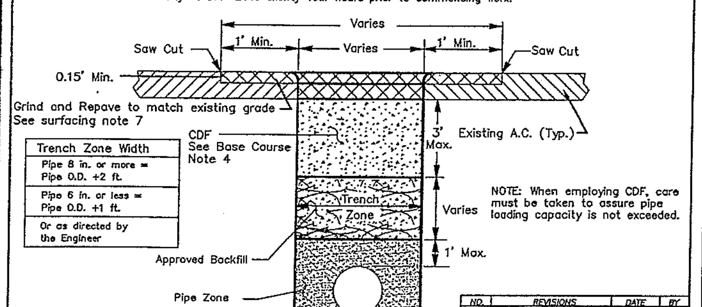
1. Granular backfill as approved by local agency or W.S.D.O.T. specifications for granular backfill. Compacted to 95% of maximum density in the trench zone using Method C compaction as per Section 2–03.3(14)C.
2. Native material may be used if approved prior to construction by Clark County.
3. Trench zone width — see below.

PIPE ZONE:

1. Pipe zone material as specified by utility owner, and shall conform to section 9–03.12(3) WSDOT Specs.
2. 1.0 ft. max. from top of the pipe. 6" from top of pipe when CDF backfill used.

CONDITIONS:

1. A copy of the permit and requirements shall be on the job site at all times.
2. The permit holder shall be responsible for all restoration and maintenance of ditches, shoulders, driveways, landscaping, etc.
3. Call Clark County at 397–2446 twenty–four hours prior to commencing work.



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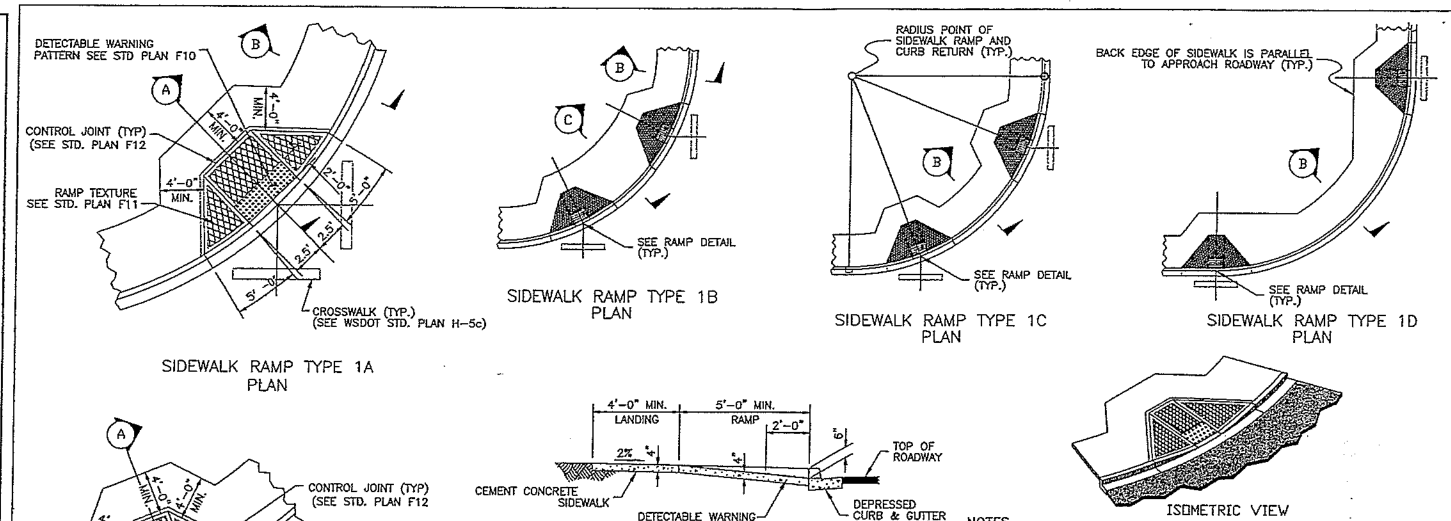
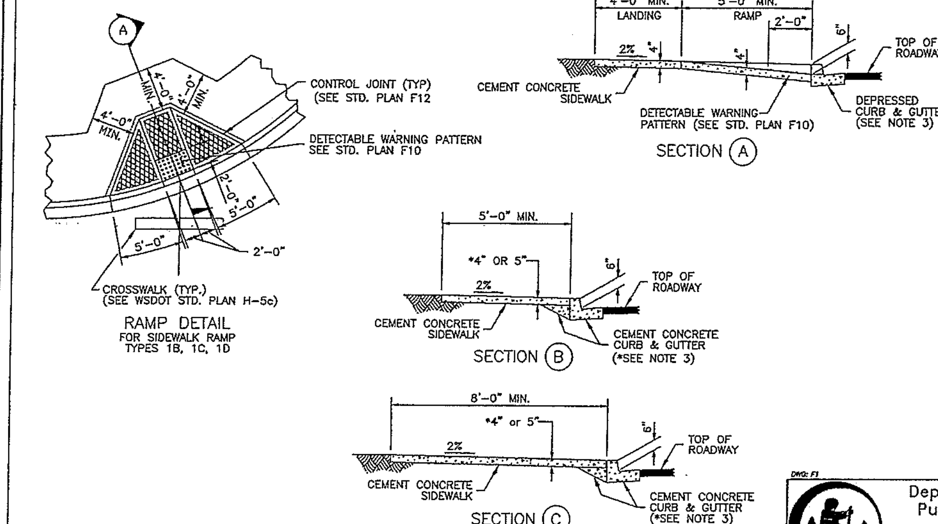
2	ILLUSTRATIVE CHANGE	07/10/03	SK
3	Notes: 6 Del., Rev. 7	12/07/03	SCH

Department of Public Works — CLARK COUNTY WASHINGTON — proud past, promising future
OPEN CUT UTILITY TRENCH BACKFILL DETAIL COLLECTOR OR ARTERIAL ROADWAY
APPROVED — COUNTY ENGINEER — 7/20/01 — DATE
STANDARD U1 PLAN No.





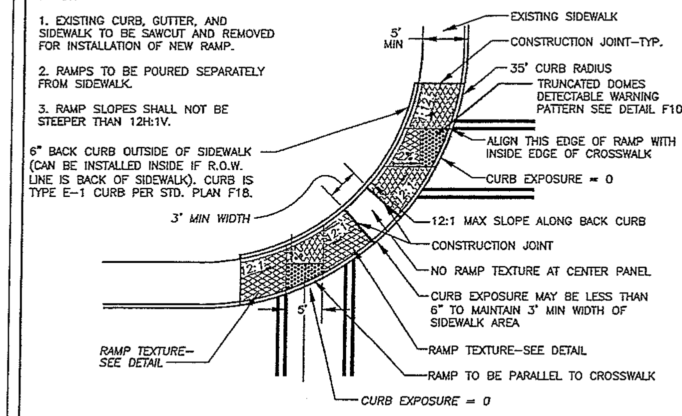
NOTES

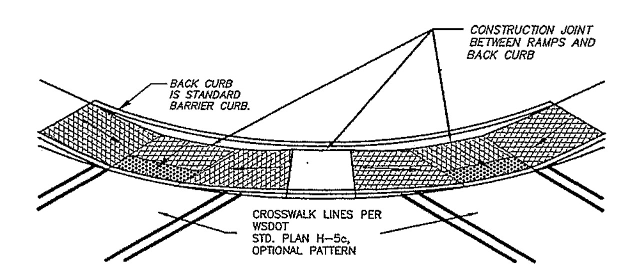
1. Avoid placing drainage structures, junction boxes or other obstructions in front of ramp access areas.
2. Detectable warning patterns may be created by any method that will achieve the truncated dome dimensions and spacing shown.
3. Curb and gutter shown, see Construction Plans for the curb design specified. See Std. Plan F18 for standard curb details, and std. plan F18b for rolled curb & gutter with THICKENED SIDEWALK.
4. The plan views for SIDEWALK RAMP TYPES 1B, 1C & 1D are provided to define each ramp type. See the RAMP DETAIL on this sheet. See Std. Plan F12 for sidewalk joint placement and details.
5. Ramp slopes shall not be steeper than 12H:1V.
6. For Arterials and Collectors use WSDOT Standard Plan F–3a.

Department of Public Works — CLARK COUNTY WASHINGTON — proud past, promising future
SIDEWALK RAMP TYPES 1A, 1B, 1C & 1D
APPROVED — COUNTY ENGINEER — 01/01/04 — DATE
STANDARD F1 PLAN No.

NOTES:

1. EXISTING CURB, GUTTER, AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF NEW RAMP.
2. RAMPS TO BE POURED SEPARATELY FROM SIDEWALK.
3. RAMP SLOPES SHALL NOT BE STEEPER THAN 12H:1V.

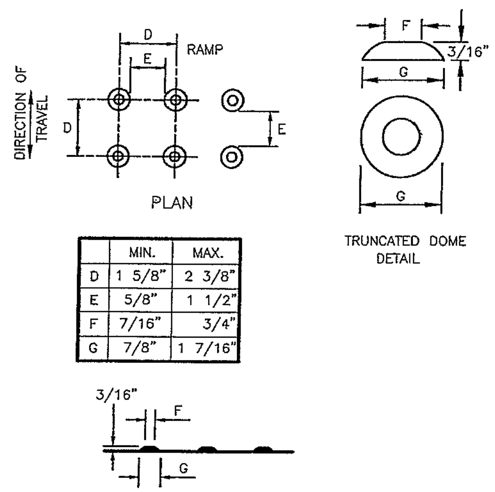




THIS TYPE OF RAMP IS ONLY TO BE USED IN EXISTING RESTRICTED RIGHT-OF-WAY AREAS. DOUBLE RAMP SHOWN-SINGLE RAMP MAY BE USED AT SOME INSTALLATIONS.

NO.	REVISIONS	DATE	BY
1	TRUNCATED DOMES	6/14/03	SCH

Department of Public Works — CLARK COUNTY WASHINGTON
TYPE 2 ALTERNATE RAMP – DOUBLE
APPROVED — COUNTY ENGINEER — 8/22/00 — DATE
F2b



	MIN.	MAX.
D	1 5/8"	2 3/8"
E	5/8"	1 1/2"
F	7/16"	3/4"
G	7/8"	1 7/16"

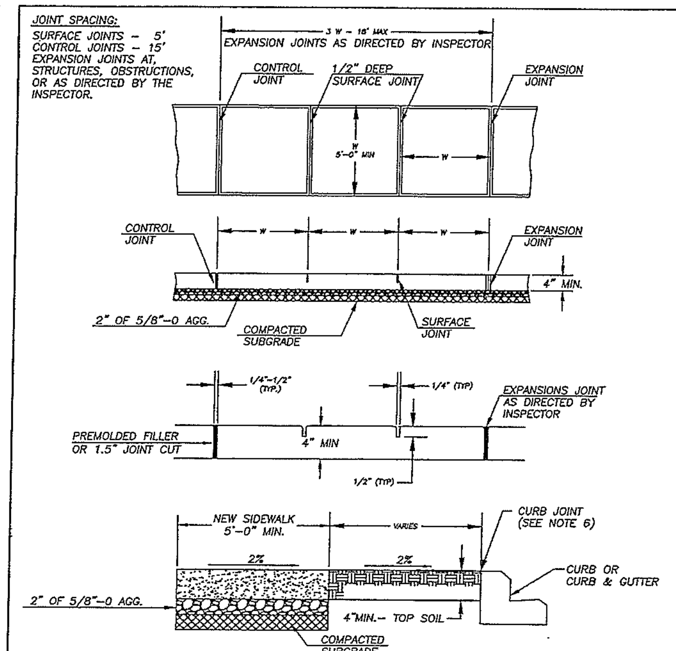
TRUNCATED DOMES (SEE NOTE 2) DETECTABLE WARNING PATTERN DETAIL

NOTES

1. AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREA.
2. THE DETECTABLE WARNING PATTERNS CAN BE CREATED BY ACCEPTABLE MEANS THAT WILL ACHIEVE THE TRUNCATED DOME DIMENSIONS AND SPACING SHOWN.
3. PLACE TRUNCATED DOME DETECTABLE WARNING TEXTURE IN THE LOWER 24" OF THE THROAT OF THE RAMP ONLY. ARRANGE DOMES USING IN–LINE PATTERN ONLY AS SHOWN. COLOR OF TEXTURE (COATING) SHALL BE SAFETY YELLOW IN COMPLIANCE WITH WSDOT STD. SPEC. OR AS INSTRUCTED BY COUNTY INSPECTOR.
4. FOR CONSTRUCTION OF SIDEWALK RAMPS OUTSIDE OF PUBLIC RIGHT–OF–WAY, CHECK WITH STATE BUILDING CODES.

Department of Public Works — CLARK COUNTY WASHINGTON — proud past, promising future
TRUNCATED DOME DETECTABLE WARNING PATTERN
APPROVED — COUNTY ENGINEER — 01/01/04 — DATE
STANDARD F10 PLAN No.

JOINT SPACING:
SURFACE JOINTS – 5'
CONTROL JOINTS – 15'
EXPANSION JOINTS AT STRUCTURES, OBSTRUCTIONS, OR AS DIRECTED BY THE INSPECTOR.

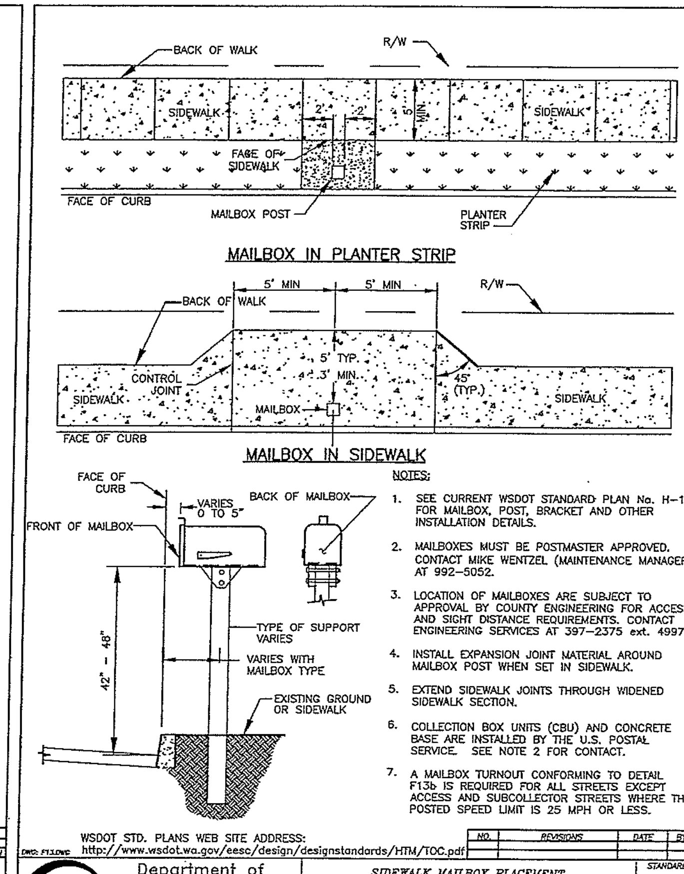


NOTES:

1. CONCRETE SHALL BE 3,000 PSI MIN. (CLASS 3000), 3 1/2" SLUMP (± 1")
2. FINISH SHALL BE MEDIUM BROOM PERPENDICULAR TO PEDESTRIAN TRAFFIC UNLESS OTHERWISE DIRECTED.
3. ALL EXISTING EDGES SHALL BE SAWCUT.
4. NO FILLER REQUIRED FOR SURFACE JOINTS.
5. ALL JOINTS AND EDGES SHALL BE FINISHED WITH 1/4" RADIUS EDGER (3" SMOOTH EACH SIDE)
6. FOR SIDEWALKS ADJACENT TO THE CURB AND POURED AT THE SAME TIME AS THE CURB, THE JOINT BETWEEN THEM SHALL BE A TROWELED JOINT WITH A MIN. 1/2" RADIUS.

NO.	REVISIONS	DATE	BY
1	CHANGE SUBGRADE &	03/28/02	KB
2	+ 2" BASE AGG. & NOTES	10/07/02	SCH

Department of Public Works — CLARK COUNTY WASHINGTON — proud past, promising future
SIDEWALK DETAIL
APPROVED — COUNTY ENGINEER — 01/01/04 — DATE
STANDARD F12 PLAN No.

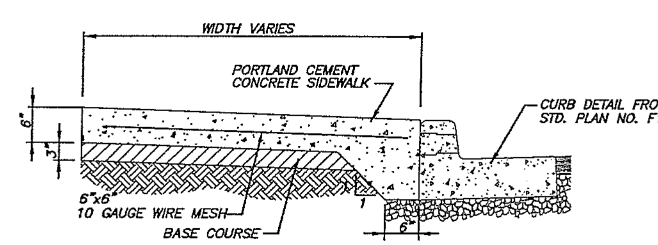


NOTES:

1. SEE CURRENT WSDOT STANDARD PLAN No. H–12 FOR MAILBOX, POST, BRACKET AND OTHER INSTALLATION DETAILS.
2. MAILBOXES MUST BE POSTMASTER APPROVED. CONTACT MIKE WENTZEL (MAINTENANCE MANAGER) AT 992–5052.
3. LOCATION OF MAILBOXES ARE SUBJECT TO APPROVAL BY COUNTY ENGINEERING FOR ACCESS AND SIGHT DISTANCE REQUIREMENTS. CONTACT ENGINEERING SERVICES AT 397–2375 ext. 4997
4. INSTALL EXPANSION JOINT MATERIAL AROUND MAILBOX POST WHEN SET IN SIDEWALK.
5. EXTEND SIDEWALK JOINTS THROUGH WIDENED SIDEWALK SECTION.
6. COLLECTION BOX UNITS (CBU) AND CONCRETE BASE ARE INSTALLED BY THE U.S. POSTAL SERVICE. SEE NOTE 2 FOR CONTACT.
7. A MAILBOX TURNOUT CONFORMING TO DETAIL F13b IS REQUIRED FOR ALL STREETS EXCEPT ACCESS AND SUBCOLLECTOR STREETS WHERE THE POSTED SPEED LIMIT IS 25 MPH OR LESS.

WSDOT STD. PLANS WEB SITE ADDRESS:
http://www.wsdot.wa.gov/eesc/design/designstandards/HTM/TOC.pdf

Department of Public Works — CLARK COUNTY WASHINGTON — proud past, promising future
SIDEWALK MAILBOX PLACEMENT
APPROVED — COUNTY ENGINEER — 01/01/04 — DATE
STANDARD F13 PLAN No.



THICKENED SIDEWALK

NTS

NOT FOR CONSTRUCTION

CLARK COUNTY WASHINGTON — proud past, promising future

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
ROADWAY DETAILS

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HORIZ.	NA
VERT.	NA
DATE:	3/11/2005

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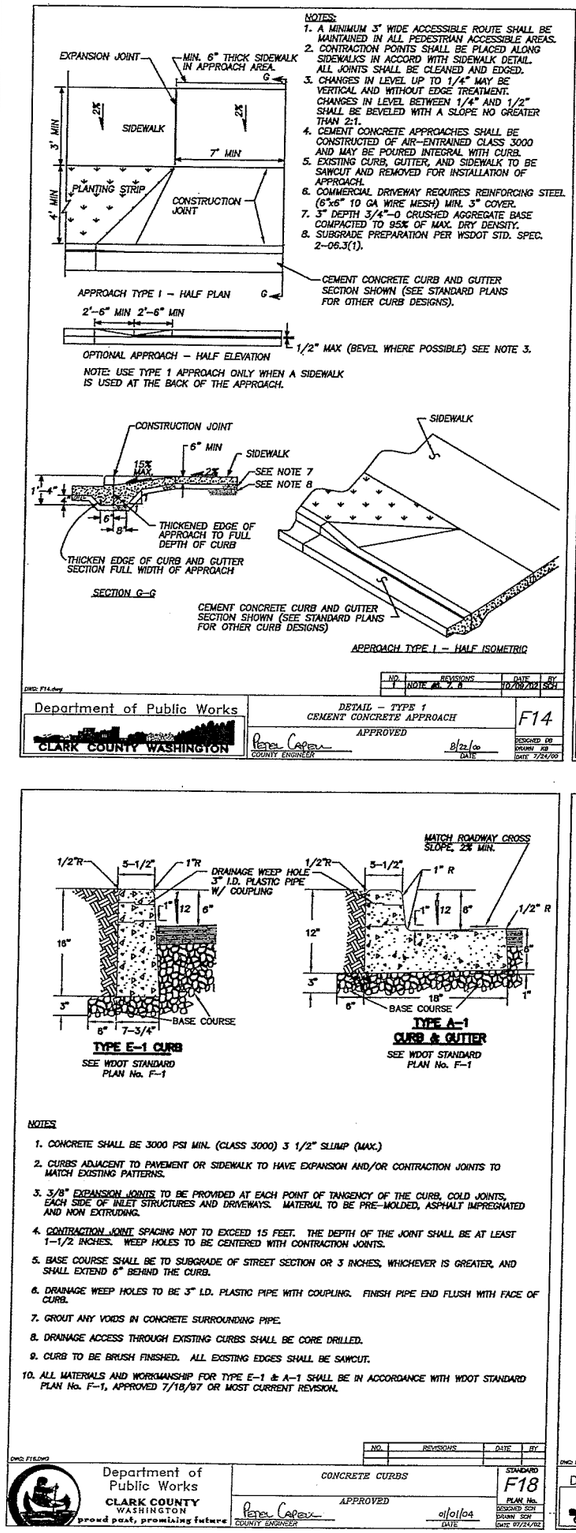


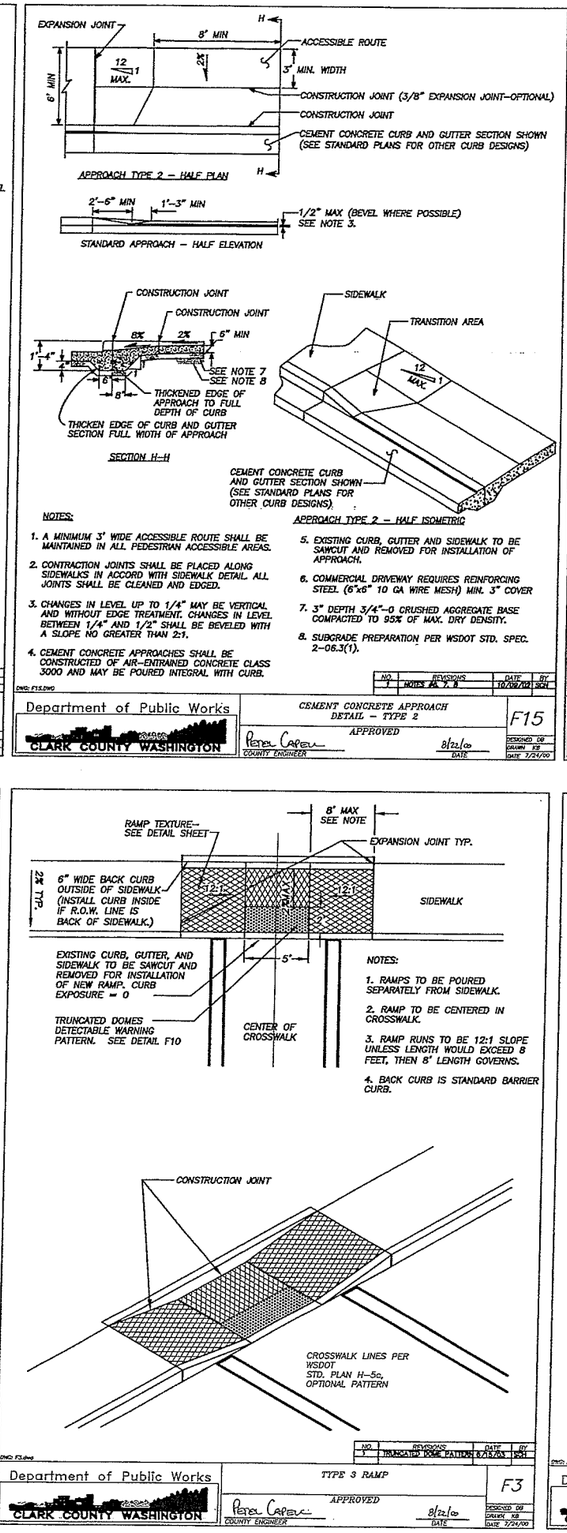
NOTES:

1. A MINIMUM 3' WIDE ACCESSIBLE ROUTE SHALL BE MAINTAINED IN ALL PEDESTRIAN ACCESSIBLE AREAS.
2. CONTRACTION POINTS SHALL BE PLACED ALONG SIDEWALKS IN ACCORD WITH SIDEWALK DETAIL. ALL JOINTS SHALL BE CLEANED AND EDGED.
3. CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 2:1.
4. CEMENT CONCRETE APPROACHES SHALL BE CONSTRUCTED OF AIR–ENTRAINED CLASS 3000 AND MAY BE POURED INTEGRAL WITH CURB.
5. EXISTING CURB, GUTTER, AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF APPROACH.
6. COMMERCIAL DRIVEWAY REQUIRES REINFORCING STEEL (6"x6" 10 GA WIRE MESH) MIN. 3" COVER.
7. 3" DEPTH 3/4"–0 CRUSHED AGGREGATE BASE COMPACTED TO 95% OF MAX. DRY DENSITY.
8. SUBGRADE PREPARATION PER WSDOT STD. SPEC. 2–06.3(1).

NO.	REVISIONS	DATE	BY
1	NOTE #6 & 8	10/09/02	SCH

DWG: F14.dwg

Department of Public Works
CLARK COUNTY WASHINGTON
DETAIL – TYPE 1
CEMENT CONCRETE APPROACH
APPROVED
Peter Capell, COUNTY ENGINEER — 8/22/00 DATE
F14
DESIGNED DB
DRAWN KB
DATE 7/24/00



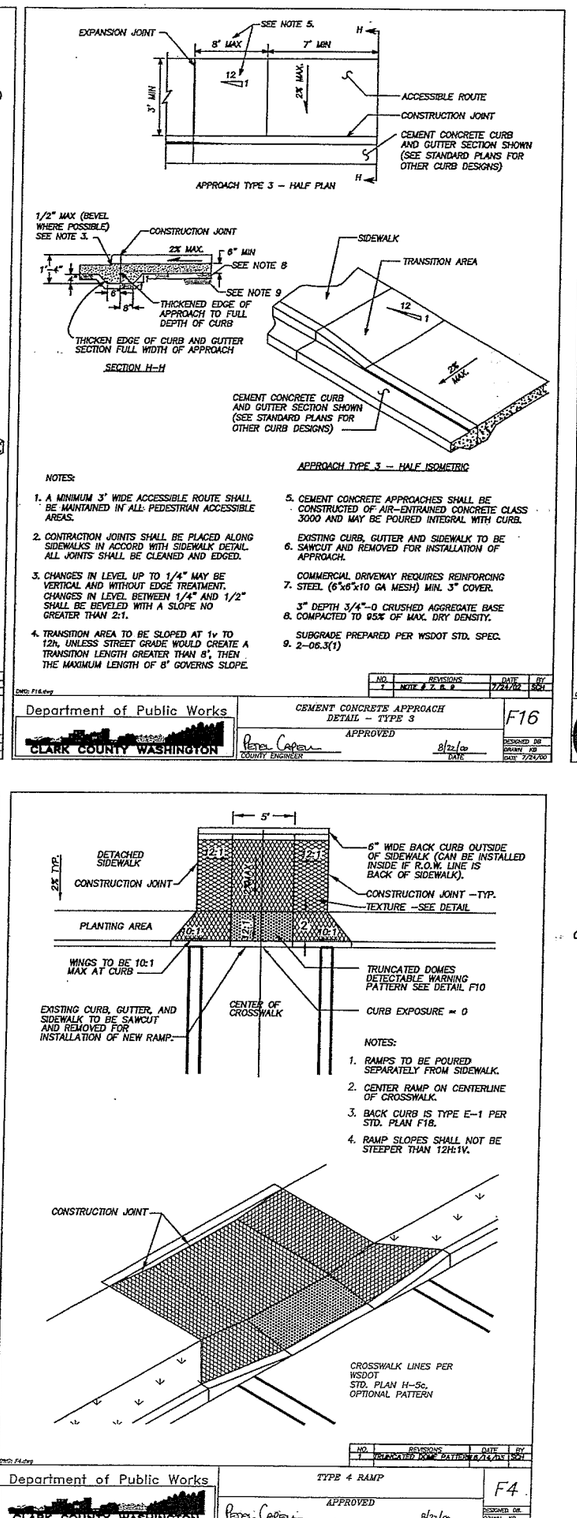
NOTES:

1. A MINIMUM 3' WIDE ACCESSIBLE ROUTE SHALL BE MAINTAINED IN ALL PEDESTRIAN ACCESSIBLE AREAS.
2. CONTRACTION JOINTS SHALL BE PLACED ALONG SIDEWALKS IN ACCORD WITH SIDEWALK DETAIL. ALL JOINTS SHALL BE CLEANED AND EDGED.
3. CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 2:1.
4. CEMENT CONCRETE APPROACHES SHALL BE CONSTRUCTED OF AIR–ENTRAINED CONCRETE CLASS 3000 AND MAY BE POURED INTEGRAL WITH CURB.
5. EXISTING CURB, GUTTER AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF APPROACH.
6. COMMERCIAL DRIVEWAY REQUIRES REINFORCING STEEL (6"x6" 10 GA WIRE MESH) MIN. 3" COVER
7. 3" DEPTH 3/4"–0 CRUSHED AGGREGATE BASE COMPACTED TO 95% OF MAX. DRY DENSITY.
8. SUBGRADE PREPARATION PER WSDOT STD. SPEC. 2–06.3(1).

NO.	REVISIONS	DATE	BY
1	NOTES #6, 7, 8	10/09/02	SCH

DWG: F15.DWG

Department of Public Works
CLARK COUNTY WASHINGTON
CEMENT CONCRETE APPROACH
DETAIL – TYPE 2
APPROVED
Peter Capell, COUNTY ENGINEER — 8/22/00 DATE
F15
DESIGNED DB
DRAWN KB
DATE 7/24/00



NOTES:

1. A MINIMUM 3' WIDE ACCESSIBLE ROUTE SHALL BE MAINTAINED IN ALL PEDESTRIAN ACCESSIBLE AREAS.
2. CONTRACTION JOINTS SHALL BE PLACED ALONG SIDEWALKS IN ACCORD WITH SIDEWALK DETAIL. ALL JOINTS SHALL BE CLEANED AND EDGED.
3. CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL AND WITHOUT EDGE TREATMENT. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 2:1.
4. TRANSITION AREA TO BE SLOPED AT 1v TO 12h, UNLESS STREET GRADE WOULD CREATE A TRANSITION LENGTH GREATER THAN 8', THEN THE MAXIMUM LENGTH OF 8' GOVERNS SLOPE.
5. CEMENT CONCRETE APPROACHES SHALL BE CONSTRUCTED OF AIR–ENTRAINED CONCRETE CLASS 3000 AND MAY BE POURED INTEGRAL WITH CURB.

EXISTING CURB, GUTTER AND SIDEWALK TO BE SAWCUT AND REMOVED FOR INSTALLATION OF APPROACH.

COMMERCIAL DRIVEWAY REQUIRES REINFORCING
6. STEEL (6"x6"x10 GA MESH) MIN. 3" COVER.

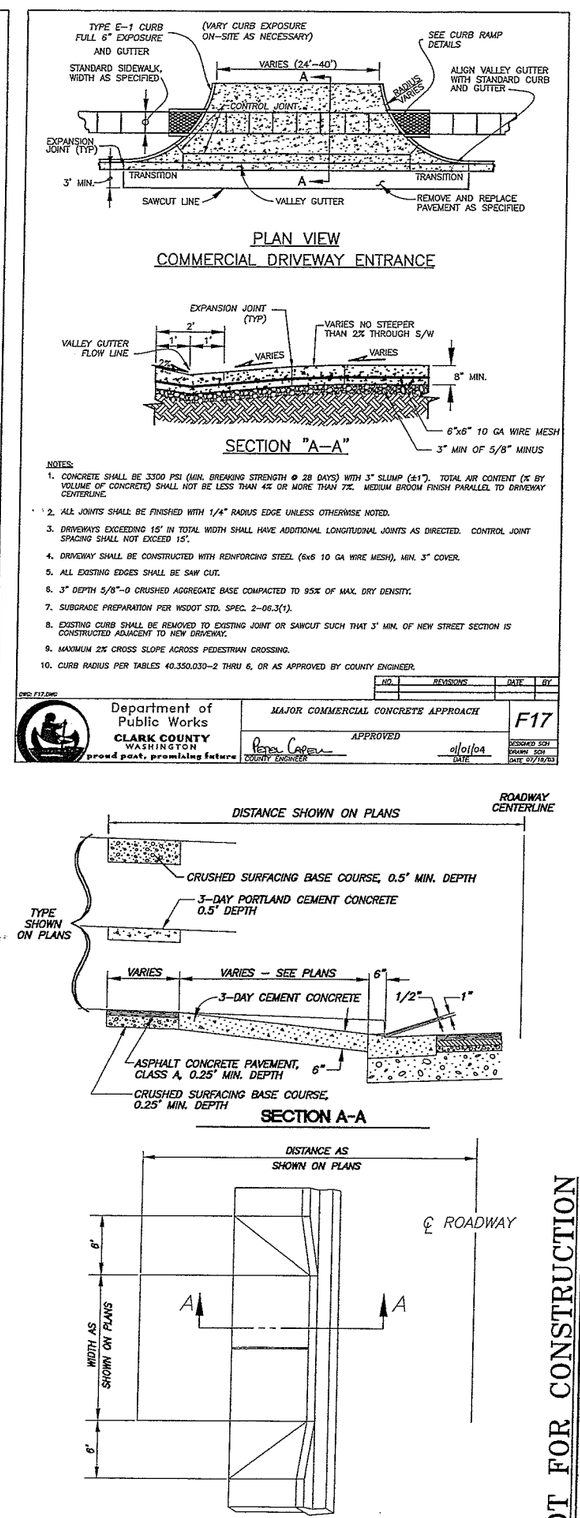
3" DEPTH 3/4"–0 CRUSHED AGGREGATE BASE
7. COMPACTED TO 95% OF MAX. DRY DENSITY.

SUBGRADE PREPARED PER WSDOT STD. SPEC.
8. 2–06.3(1)

NO.	REVISIONS	DATE	BY
1	NOTE # 2, 5, 8	7/24/02	SCH

DWG: F16.dwg

Department of Public Works
CLARK COUNTY WASHINGTON
CEMENT CONCRETE APPROACH
DETAIL – TYPE 3
APPROVED
Peter Capell, COUNTY ENGINEER — 8/22/00 DATE
F16
DESIGNED DB
DRAWN KB
DATE 7/24/00



NOTES:

1. CONCRETE SHALL BE 3300 PSI (MIN. BREAKING STRENGTH @ 28 DAYS) WITH 3" SLUMP (±1"). TOTAL AIR CONTENT (% BY VOLUME OF CONCRETE) SHALL NOT BE LESS THAN 4% OR MORE THAN 7%. MEDIUM BROOM FINISH PARALLEL TO DRIVEWAY CENTERLINE.
2. ALL JOINTS SHALL BE FINISHED WITH 1/4" RADIUS EDGE UNLESS OTHERWISE NOTED.
3. DRIVEWAYS EXCEEDING 15' IN TOTAL WIDTH SHALL HAVE ADDITIONAL LONGITUDINAL JOINTS AS DIRECTED. CONTROL JOINT SPACING SHALL NOT EXCEED 15'.
4. DRIVEWAY SHALL BE CONSTRUCTED WITH REINFORCING STEEL (6x6 10 GA WIRE MESH), MIN. 3" COVER.
5. ALL EXISTING EDGES SHALL BE SAW CUT.
6. 3" DEPTH 5/8"–0 CRUSHED AGGREGATE BASE COMPACTED TO 95% OF MAX. DRY DENSITY.
7. SUBGRADE PREPARATION PER WSDOT STD. SPEC. 2–06.3(1).
8. EXISTING CURB SHALL BE REMOVED TO EXISTING JOINT OR SAWCUT SUCH THAT 3' MIN. OF NEW STREET SECTION IS CONSTRUCTED ADJACENT TO NEW DRIVEWAY.
9. MAXIMUM 2% CROSS SLOPE ACROSS PEDESTRIAN CROSSING.
10. CURB RADIUS PER TABLES 40.350.030–2 THRU 6, OR AS APPROVED BY COUNTY ENGINEER.

NO.	REVISIONS	DATE	BY

DWG: F17.DWG

Department of Public Works
CLARK COUNTY WASHINGTON
proud past, promising future
MAJOR COMMERCIAL CONCRETE APPROACH
APPROVED
Peter Capell, COUNTY ENGINEER — 01/01/04 DATE
F17
DESIGNED SCH
DRAWN SCH
DATE 07/18/03

NOTES

1. CONCRETE SHALL BE 3000 PSI MIN. (CLASS 3000) 3 1/2" SLUMP (MAX.)
2. CURBS ADJACENT TO PAVEMENT OR SIDEWALK TO HAVE EXPANSION AND/OR CONTRACTION JOINTS TO MATCH EXISTING PATTERNS.
3. 3/8" EXPANSION JOINTS TO BE PROVIDED AT EACH POINT OF TANGENCY OF THE CURB, COLD JOINTS, EACH SIDE OF INLET STRUCTURES AND DRIVEWAYS. MATERIAL TO BE PRE–MOLDED, ASPHALT IMPREGNATED AND NON EXTRUDING.
4. CONTRACTION JOINT SPACING NOT TO EXCEED 15 FEET. THE DEPTH OF THE JOINT SHALL BE AT LEAST 1–1/2 INCHES. WEEP HOLES TO BE CENTERED WITH CONTRACTION JOINTS.
5. BASE COURSE SHALL BE TO SUBGRADE OF STREET SECTION OR 3 INCHES, WHICHEVER IS GREATER, AND SHALL EXTEND 6" BEHIND THE CURB.
6. DRAINAGE WEEP HOLES TO BE 3" I.D. PLASTIC PIPE WITH COUPLING. FINISH PIPE END FLUSH WITH FACE OF CURB.
7. GROUT ANY VOIDS IN CONCRETE SURROUNDING PIPE.
8. DRAINAGE ACCESS THROUGH EXISTING CURBS SHALL BE CORE DRILLED.
9. CURB TO BE BRUSH FINISHED. ALL EXISTING EDGES SHALL BE SAWCUT.
10. ALL MATERIALS AND WORKMANSHIP FOR TYPE E–1 & A–1 SHALL BE IN ACCORDANCE WITH WDOT STANDARD PLAN No. F–1, APPROVED 7/18/97 OR MOST CURRENT REVISION.

NO.	REVISIONS	DATE	BY

DWG: F18.DWG

Department of Public Works
CLARK COUNTY WASHINGTON
proud past, promising future
CONCRETE CURBS
APPROVED
Peter Capell, COUNTY ENGINEER — 01/01/04 DATE
STANDARD F18
PLAN No.
DESIGNED SCH
DRAWN SCH
DATE 07/18/03

NO.	REVISIONS	DATE	BY
1	TRUNCATED DOME PATTERN	8/15/03	SCH

DWG: F3.dwg

Department of Public Works
CLARK COUNTY WASHINGTON
TYPE 3 RAMP
APPROVED
Peter Capell, COUNTY ENGINEER — 8/22/00 DATE
F3
DESIGNED DB
DRAWN KB
DATE 7/24/00

NO.	REVISIONS	DATE	BY
1	TRUNCATED DOME PATTERN	8/14/03	SCH

DWG: F4.dwg

Department of Public Works
CLARK COUNTY WASHINGTON
TYPE 4 RAMP
APPROVED
Peter Capell, COUNTY ENGINEER — 8/22/00 DATE
F4
DESIGNED DB
DRAWN KB
DATE 7/24/00

DESIGNED:	SLW
DRAWN:	GME
CRP:	330422
HORIZ.	NA
VERT.	NA
DATE:	3/11/2005
DWG:	D02

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ROADWAY DETAILS

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CLARK COUNTY WASHINGTON

V: SHERYL 08/24/04 6:23pm ---> V:\PROJECT\11900\11944\DWG\C944S012.DWG

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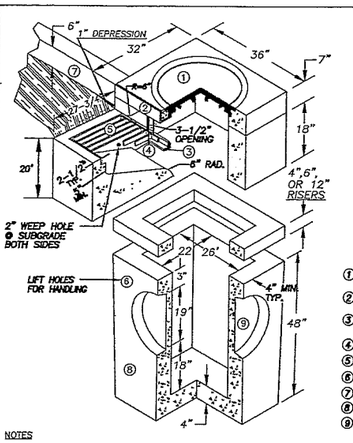

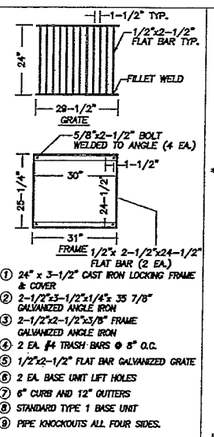

① 24" x 3-1/2" CAST IRON LOCKING FRAME & COVER
② 2-1/2"x3-1/2"x1/4"x 35 7/8" GALVANIZED ANGLE IRON
③ 2-1/2"x2-1/2"x3/8" FRAME GALVANIZED ANGLE IRON
④ 2 EA. #4 TRASH BARS @ 8" O.C.
⑤ 1/2"x2-1/2" FLAT BAR GALVANIZED GRATE
⑥ 2 EA. BASE UNIT LIFT HOLES
⑦ 6" CURB AND 12" GUTTERS
⑧ STANDARD TYPE 1 BASE UNIT
⑨ PIPE KNOCKOUTS ALL FOUR SIDES.

NOTES

1. COMBINATION CURB INLET TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 & C890 UNLESS SHOWN ON PLANS OR NOTED IN STANDARD SPECIFICATIONS.
2. REINFORCING FOR INLET UNIT, 3 EA. #4 HORZONTAL BARS; REINFORCING FOR TOP UNIT, 2 EA. #3 HORZONTAL BARS; REINFORCING FOR INLET SLOPED BASE, 4x4 MESH.
3. ALL REBAR TO MEET ASTM A615 GRADE 60.
4. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQAURE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497. WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
5. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4,000.
6 PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
7. KNOCKOUTS OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS INLET WALL THICKNESS.
8. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES WITH MAX. DIAM. OF 17".
9. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
10. ANY PROTUDING ENDS OF PIPES SHALL BE TRIMMED FLUSH WITH THE INSIDE WALLS AND GROUTED TO THE SATISFACTION OF ENGINEER.
11. GRATE TO HAVE 1" DEPRESSION AT GUTTER INLET WITH GUTTER TO BE TAPERED DOWN TO INLET.
12. INSTALL REMOVABLE APWA TYPE 60A TRAP OR EQUAL, SEE STD. PLAN D2.1.
13. CONTRACTOR SHALL HAVE THE OPTION OF FURNISHING PRECAST OR CAST-IN-PLACE INLET STRUCTURES, UNLESS SPECIFIED.
14. SEE STD. PLAN 4.1 FOR BASIN GUTTER PAN DETAIL.

NO.	REVISIONS	DATE	BY

DWG: D3-0.DWG

Department of Public Works
CLARK COUNTY WASHINGTON
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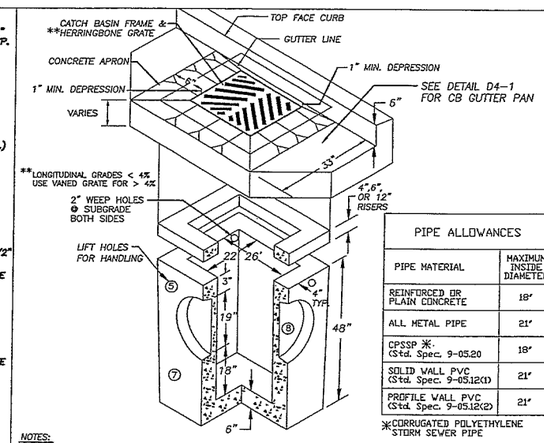
STANDARD TYPE 1 COMBINATION CURB INLET
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD D3.0
PLAN No.
DESIGNED SCH
DRAWN SCH
DATE 09/09/02



PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	18'
ALL METAL PIPE	21'
CPSSP ✳ (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. CURB INLET TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (AASHTO) M 199) & C890 UNLESS SHOWN ON PLANS OR NOTED IN STANDARD SPECIFICATIONS.
2. REINFORCING FOR INLET UNIT, 3 EA. #4 HORIZONTAL BARS.
3. REINFORCING FOR TOP UNIT, 2 EA. #3 HORIZONTAL BARS.
4. ALL REBAR TO MEET ASTM A615 GRADE 60.
5. AS AN ACCEPTABLE ALTERNATIVE TO REBAR, WELDED WIRE FABRIC HAVING A MIN. AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A497. WIRE FABRIC SHALL NOT BE PLACED IN KNOCKOUTS.
6. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4,000.
7. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN. ALL PIPE SHALL BE INSTALLED IN FACTORY PROVIDED KNOCKOUTS. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT.
8. KNOCKOUTS OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAM. PLUS INLET WALL THICKNESS.
9. ROUND KNOCKOUTS MAY BE ON ALL 4 SIDES WITH MAX. DIAM. OF 20".
10. THE MAX. DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
11. ANY PROTRUDING ENDS OF PIPES SHALL BE TRIMMED FLUSH WITH THE INSIDE WALLS AND GROUTED TO THE SATISFACTION OF ENGINEER.
12. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH WDOT STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
13. FRAME MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
14 INSTALL REMOVABLE APWA TYPE 60A TRAP OR EQUAL, SEE STD. PLAN D2.1.
15. CONTRACTOR SHALL HAVE THE OPTION OF FURNISHING PRECAST OR CAST-IN-PLACE INLET STRUCTURES, UNLESS SPECIFIED.

NO.	REVISIONS	DATE	BY

DWG: D4-0.DWG

Department of Public Works
CLARK COUNTY WASHINGTON
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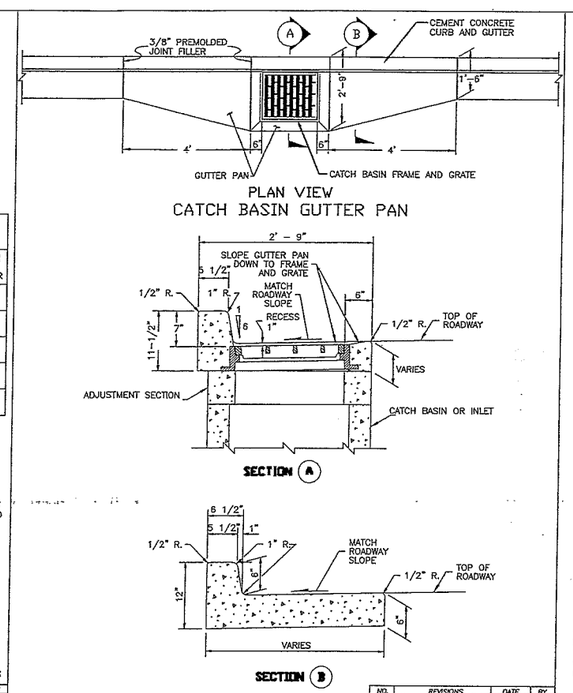
STANDARD CATCH BASIN TYPE 1
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD D4.0
PLAN No.
DESIGNED SCH
DRAWN SCH
DATE 07/07/03



NO.	REVISIONS	DATE	BY

DWG: D4-10.DWG

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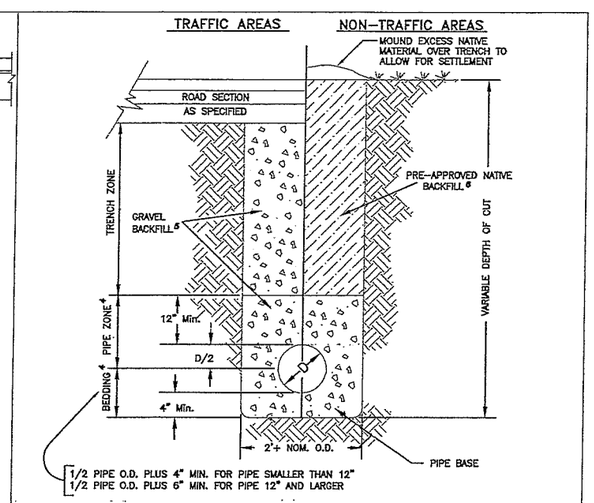
CATCH BASIN GUTTER PAN
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD D4.1
PLAN No.
DESIGNED SCH
DRAWN SCH
DATE 07/07/03



NOTES

1. FOR INSTALLATION OF DRAINAGE PIPE IN NEW DEVELOPMENT.
2. GENERAL PIPE INSTALLATION REQUIREMENTS SHALL BE PER SECTION 7-08 WSDOT SPECS.
3. TRENCH BACK FILL SHALL CONFORM TO CCC 40.350.030(C)(4)(e).
4. PIPE ZONE AND BEDDING MATERIAL SHALL CONFORM TO SECTION 9-03.12(3) WSDOT SPECS.
5. GRAVEL BACKFILL PER WSDOT SPECIFICATION SECTION 9-03.19, AND COMPACTED TO 95% MAX. DENSITY (AASHTO T-99). NATIVE SOILS MAY BE USED UPON APPROVAL BY REVIEWING AUTHORITY IF TESTING SHOWS MATERIAL IS CLASSIFIED AS A-1 OR A-3 BY AASHTO.
6. OUTSIDE THE ROADWAY PRISM, SUITABLE NATIVE BACKFILL SHALL BE COMPACTED TO 90% MAX. DENSITY (AASHTO T-99).
7. ALL COMPACTION SHALL BE IN ACCORDANCE WITH THE COMPACTION CONTROL TEST OF SECTION 2-03.3(14)D.

NO.	REVISIONS	DATE	BY

DWG: D14.DWG

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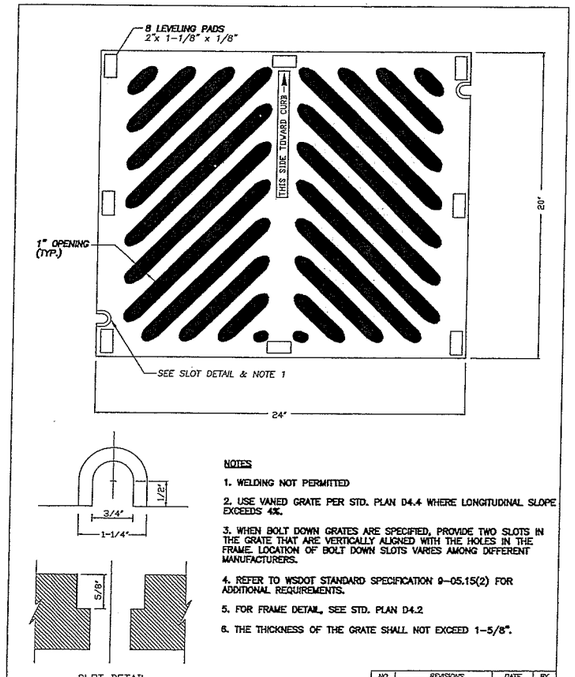
PIPE BEDDING AND BACKFILL DETAIL
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD D14
PLAN No.
DESIGNED SCH
DRAWN SCH
DATE 6/14/03



NOTES

1. WELDING NOT PERMITTED
2. USE VANED GRATE PER STD. PLAN D4.4 WHERE LONGITUDINAL SLOPE EXCEEDS 4%.
3. WHEN BOLT DOWN GRATES ARE SPECIFIED, PROVIDE TWO SLOTS IN THE GRATE THAT ARE VERTICALLY ALIGNED WITH THE HOLES IN THE FRAME. LOCATION OF BOLT DOWN SLOTS VARIES AMONG DIFFERENT MANUFACTURERS.
4. REFER TO WSDOT STANDARD SPECIFICATION 9-05.15(2) FOR ADDITIONAL REQUIREMENTS.
5. FOR FRAME DETAIL, SEE STD. PLAN D4.2
6. THE THICKNESS OF THE GRATE SHALL NOT EXCEED 1-5/8".

NO.	REVISIONS	DATE	BY

DWG: D4-3.DWG

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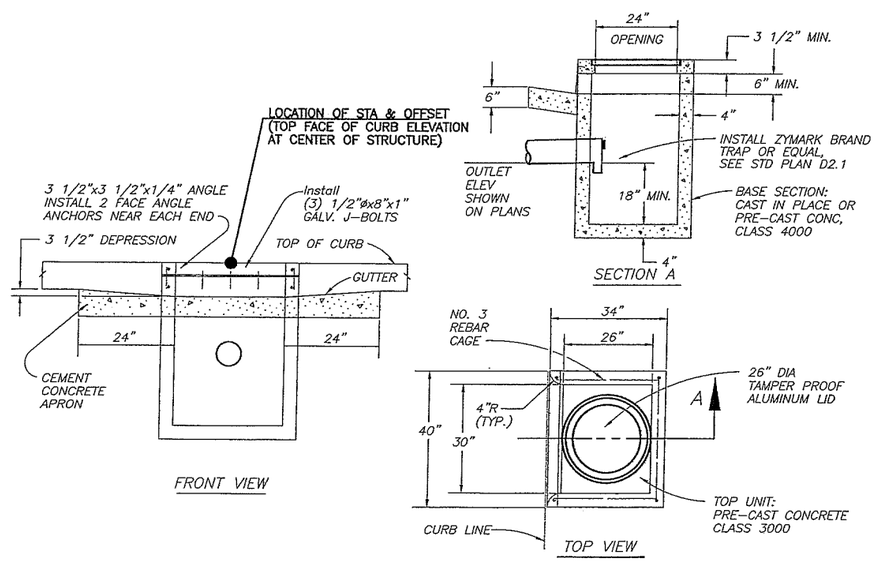
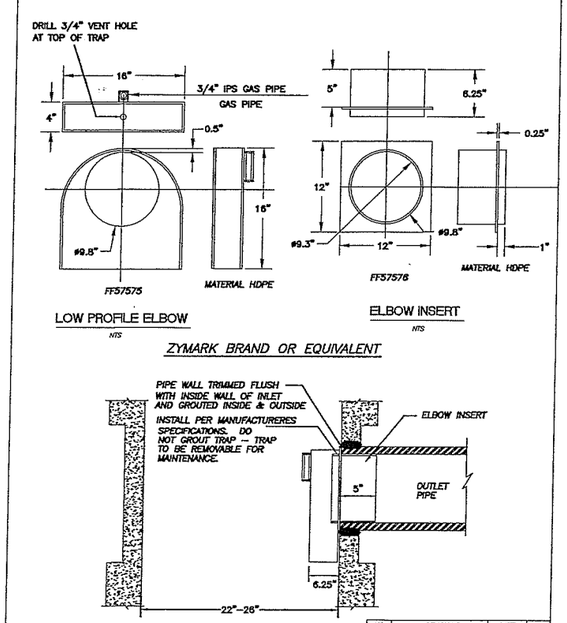
HERRINGBONE GRATE FOR CATCH BASIN
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD D4.3
PLAN No.
DESIGNED SCH
DRAWN SCH
DATE 07/07/03



CURB INLET DETAIL
NTS



NO.	REVISIONS	DATE	BY

DWG: D2-1.DWG

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CATCH BASIN OUTLET PIPE TRAP
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 DATE
STANDARD D2.1
PLAN No.
DESIGNED SCH
DRAWN SCH
DATE 06/25/03

DESIGNED: SLW
DRAWN: GME
CRP: 330422
HORIZ. NA
VERT. NA
DATE: 3/11/2005
DWG: D03

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ROADWAY DRAINAGE DETAILS

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V: SHERYL 08/24/04 8:23pm ---> V:\PROJECT\11900\11944\DWG\C944S013.DWG

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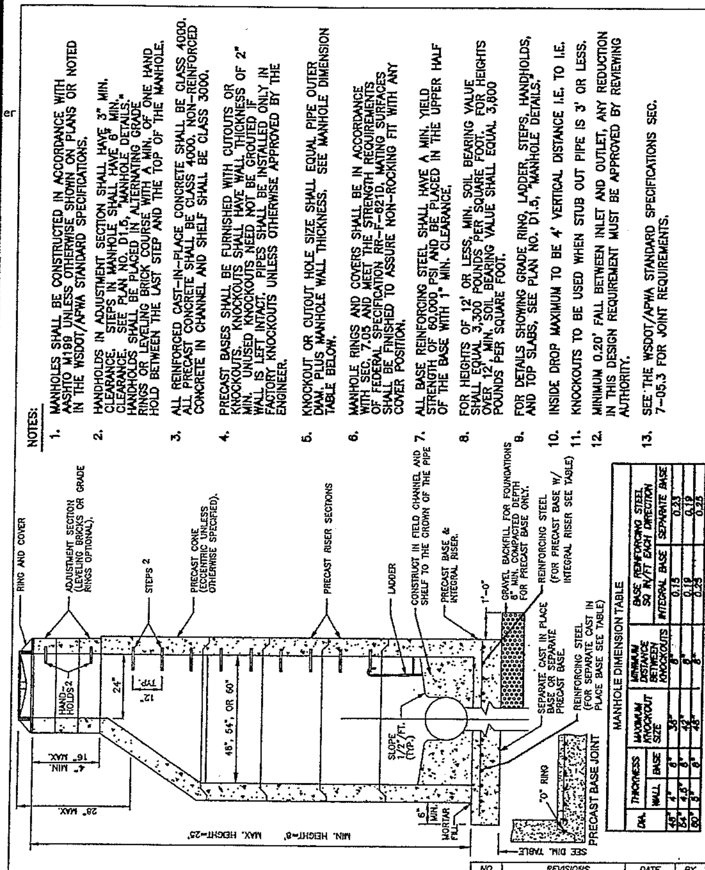

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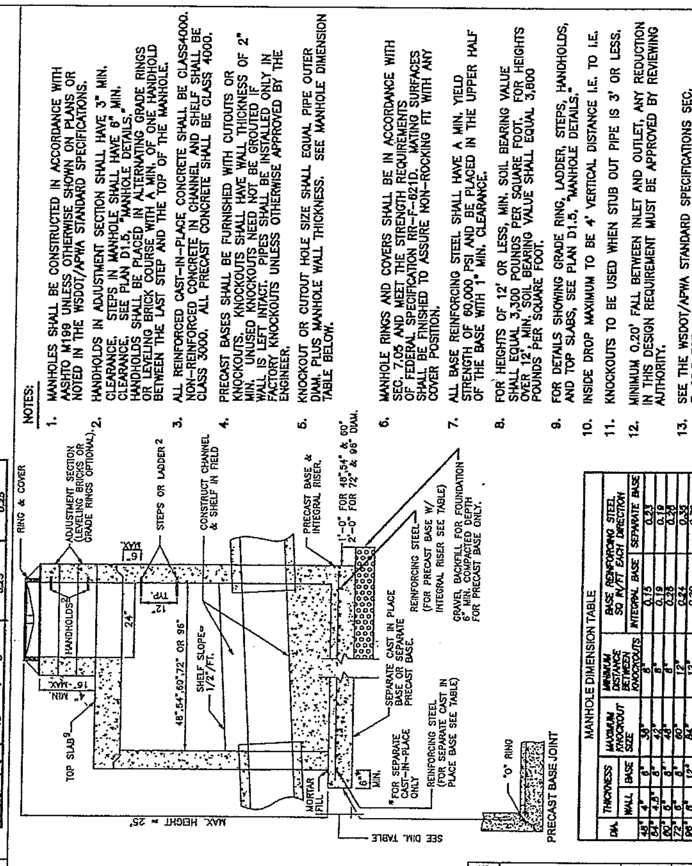
STANDARD MANHOLE TYPE 1
48", 54", & 60"
APPROVED
COUNTY ENGINEER 01/01/04
STANDARD D1.1



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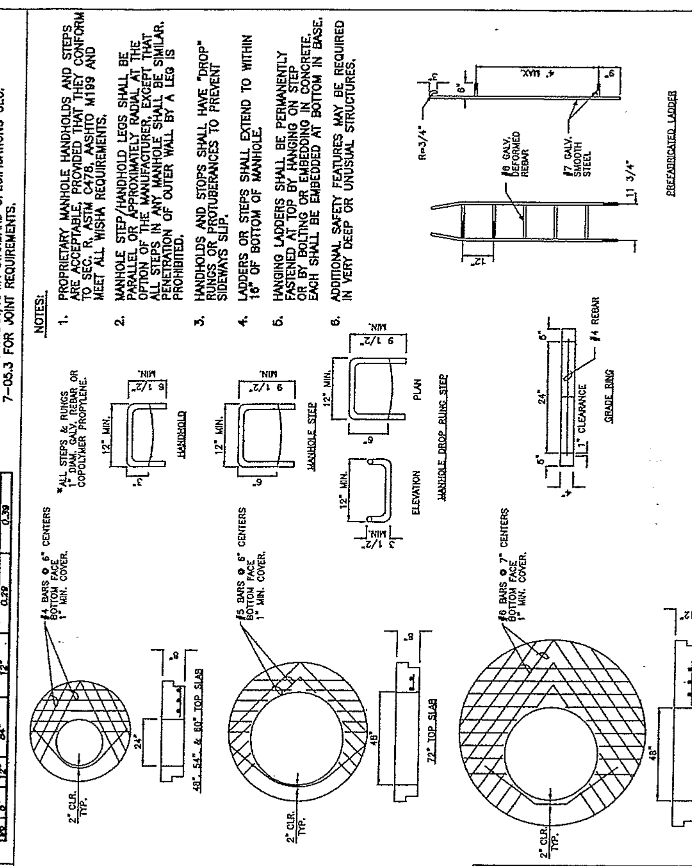
MANHOLE TYPE 3
48", 54", 60", 72", & 96"
APPROVED
COUNTY ENGINEER 01/01/04
STANDARD D1.3



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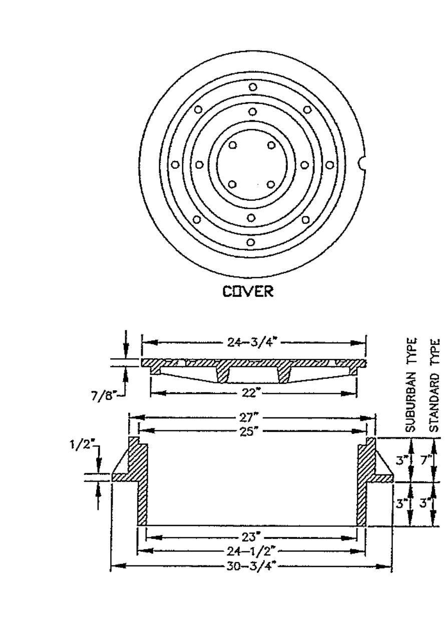
MANHOLE DETAILS
APPROVED
COUNTY ENGINEER 01/01/04
STANDARD D1.5



NOTES:

1. USE SUBURBAN TYPE ONLY IN NON-TRAFFIC AREAS, AND ONLY WITH APPROVAL BY COUNTY.
2. COVER MATERIAL TO BE DUCTILE IRON ASTM A536 GRADE 80-55-06
3. FRAME MATERIAL TO BE GRAY CAST IRON ASTM A-48 CLASS 30.
4. SEE WSDOT STANDARD SPECIFICATIONS SEC. 7.05
5. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
6. NOTCH LID FOR LIFTING HOOK.

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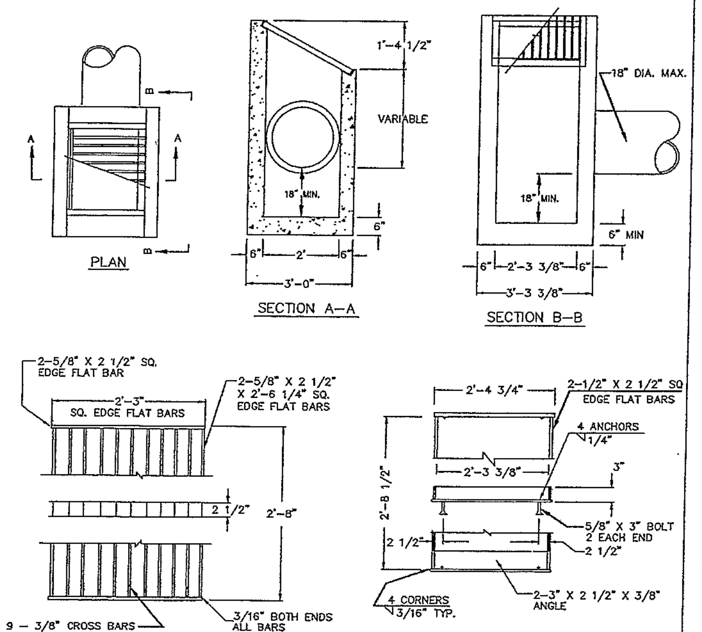
STANDARD MANHOLE FRAME AND COVER
APPROVED
COUNTY ENGINEER 01/01/04
STANDARD D1.6



NOTES:

1. DITCH INLET CONSTRUCTION IN ACCORDANCE WITH ASTM C-478
2. CATCH BASIN, FRAME, AND GRATES SHALL BE FLAT BAR STEEL OR APPROVED EQUAL.
3. INSIDE FRAME DIMENSIONS: 2'-3 3/8"x 2'-8 1/2".
4. 3/8" CROSS BARS SHALL BE FLUSH WITH THE GRATE SURFACE AND MAY BE FILLET WELDED, RESISTANCE WELDED OR ELECTROFORGED TO BEARING BARS.

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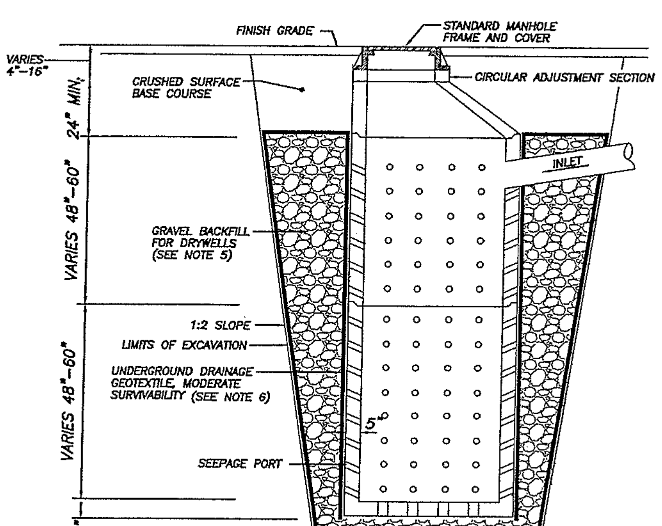
DITCH INLET
APPROVED
COUNTY ENGINEER 01/01/04
STANDARD D6



NOTES:

1. ALL PRECAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF A.S.T.M. C478
2. PRECAST CONE SECTIONS MAY BE ECCENTRIC OR CONCENTRIC.
3. ALL PIPING TO AND FROM PRECAST DRYWELLS SHALL HAVE AT LEAST 6" OF CRUSHED ROCK COVER CONTINUOUSLY AROUND PIPE WHERE DRAIN ROCK WOULD OTHERWISE BE IN CONTACT WITH PIPE.
4. PERFORATIONS SHALL BE HORIZONTAL ROWS OF (14) 2-1/4" SQUARE OR (14) 2-3/8" ROUND HOLES, EQUALLY SPACED. ROWS SHALL BE SPACED 6-1/2" CENTER TO CENTER.
5. GRAVEL BACKFILL FOR DRYWELLS PER WDOT SPECIFICATION 9-03.12(5).
6. UNDERGROUND DRAINAGE GEOTEXTILE, MODERATE SURVIVABILITY. SEE WDOT SPECIFICATION 9-33.
7. TYPICAL DRYWELL DEPTH IS 13'

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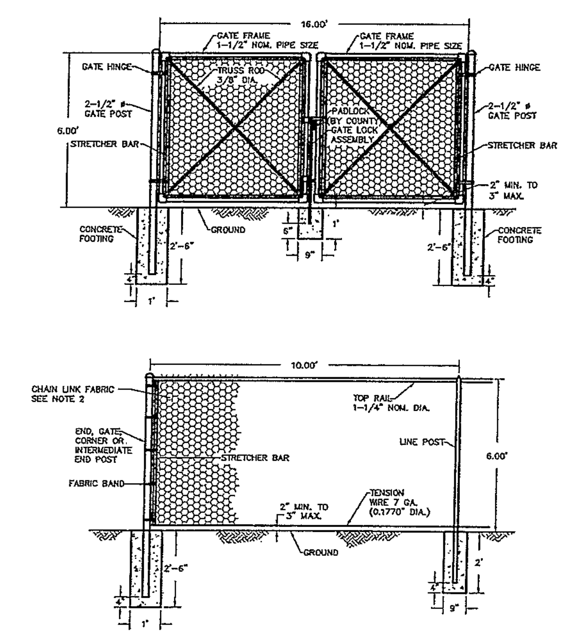
PRECAST DRYWELL
APPROVED
COUNTY ENGINEER 01/01/04
STANDARD D10



NOTES:

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION
2. CHAIN LINK FENCE FABRIC TO MEET OR EXCEED REQUIREMENTS OF WSDOT SPECIFICATION 9.16.1(7) FOR TYPE 1 FENCE (9 GA) 2" DIAMOND.

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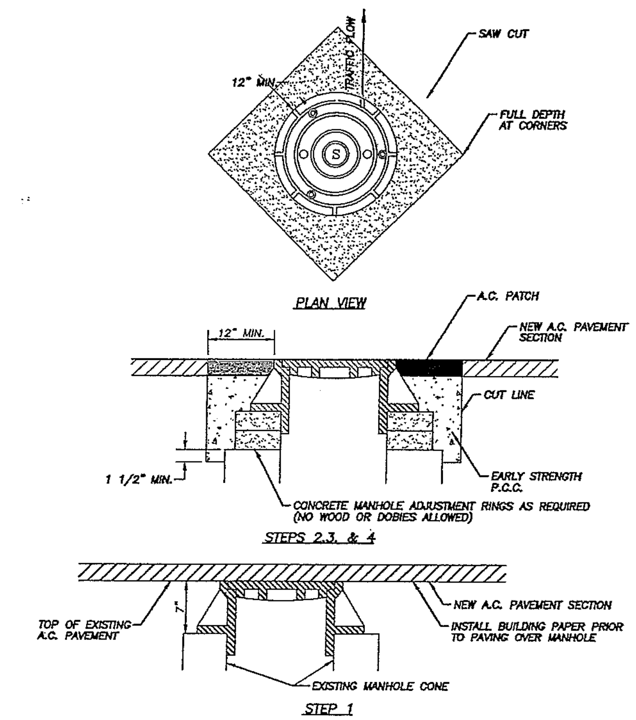
STORMWATER FACILITY CHAIN LINK FENCE
APPROVED
COUNTY ENGINEER 01/01/04
PLAN No. D26



STEP 1 COVER EXISTING MANHOLE WITH BUILDING PAPER AND CONSTRUCT A.C. PAVEMENT OVER TOP OF MANHOLE.
STEP 2 SAW CUT AND REMOVE PAVEMENT AROUND MANHOLE 12" MIN. FROM MANHOLE FRAME.
STEP 3 RAISE MANHOLE FRAME AND COVER USING CONCRETE RINGS AND MECHANICAL ADJUSTMENT DEVICES TO FINISH GRADE MATCHING PROFILE AND CROSS SLOPE.
STEP 4 BACKFILL WITH EARLY STRENGTH P.C.C. AND A.C. TO DEPTHS AS DIRECTED.

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MANHOLE ADJUSTMENT DETAIL
APPROVED
COUNTY ENGINEER
F27

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ROADWAY DRAINAGE DETAILS

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DESIGNED:	SLW
DRAWN:	GME
CRP:	330422
HORIZ.	NA
VERT.	NA
DATE:	3/11/2005
DWG:	D04

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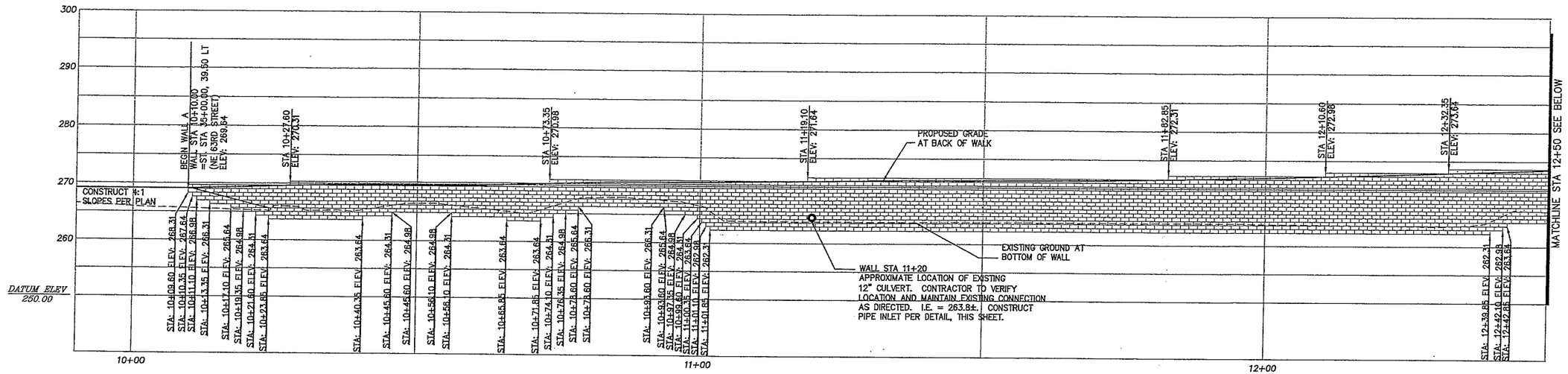
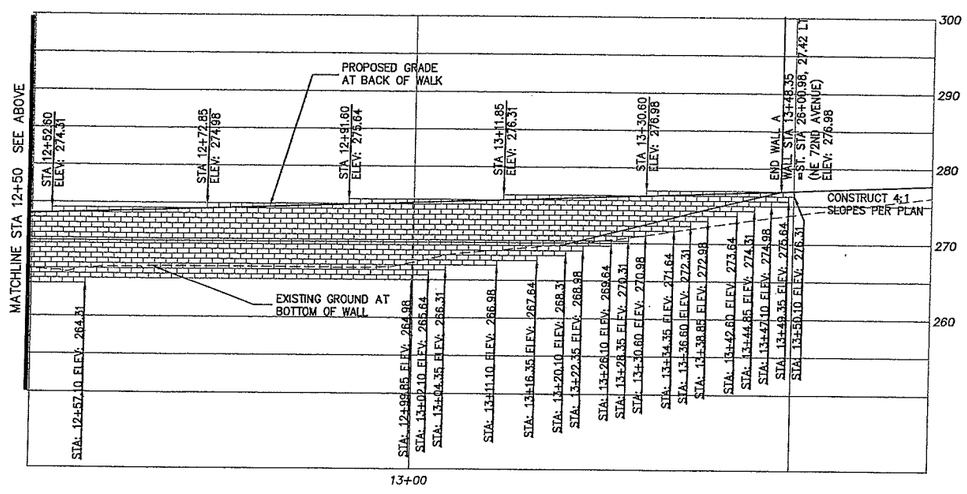


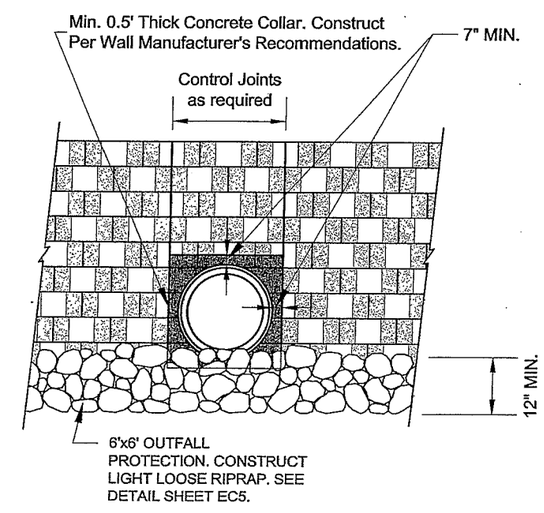


MODULAR BLOCK WALL "A"

SCALE: 1"=10' HORIZONTAL AND VERTICAL

NOTE:

CONTRACTOR TO PROVIDE DESIGN PREPARED BY PROFESSIONAL ENGINEER. SEE SPECIAL PROVISIONS.



Pipe Inlet Detail

Control Joint Cut

NOTES:

1. SEE SHEET RW5 FOR WALL DETAILS
2. OFFSETS SHOWN IN PROFILE ARE FROM PROPOSED CENTERLINE TO BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.
3. INSTALL CHAIN LINK FENCE TYPE 6 (BLACK VINYL COATED) PER DETAIL SHEET RW5, FOR LENGTH OF WALL.

DESIGNED:	SLW
DRAWN:	GMF
CRP:	330422
HORIZ.	1" = 10'
VERT:	1" = 10'
DATE:	3/11/2005
DWG:	RW1

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RETAINING WALL PROFILES

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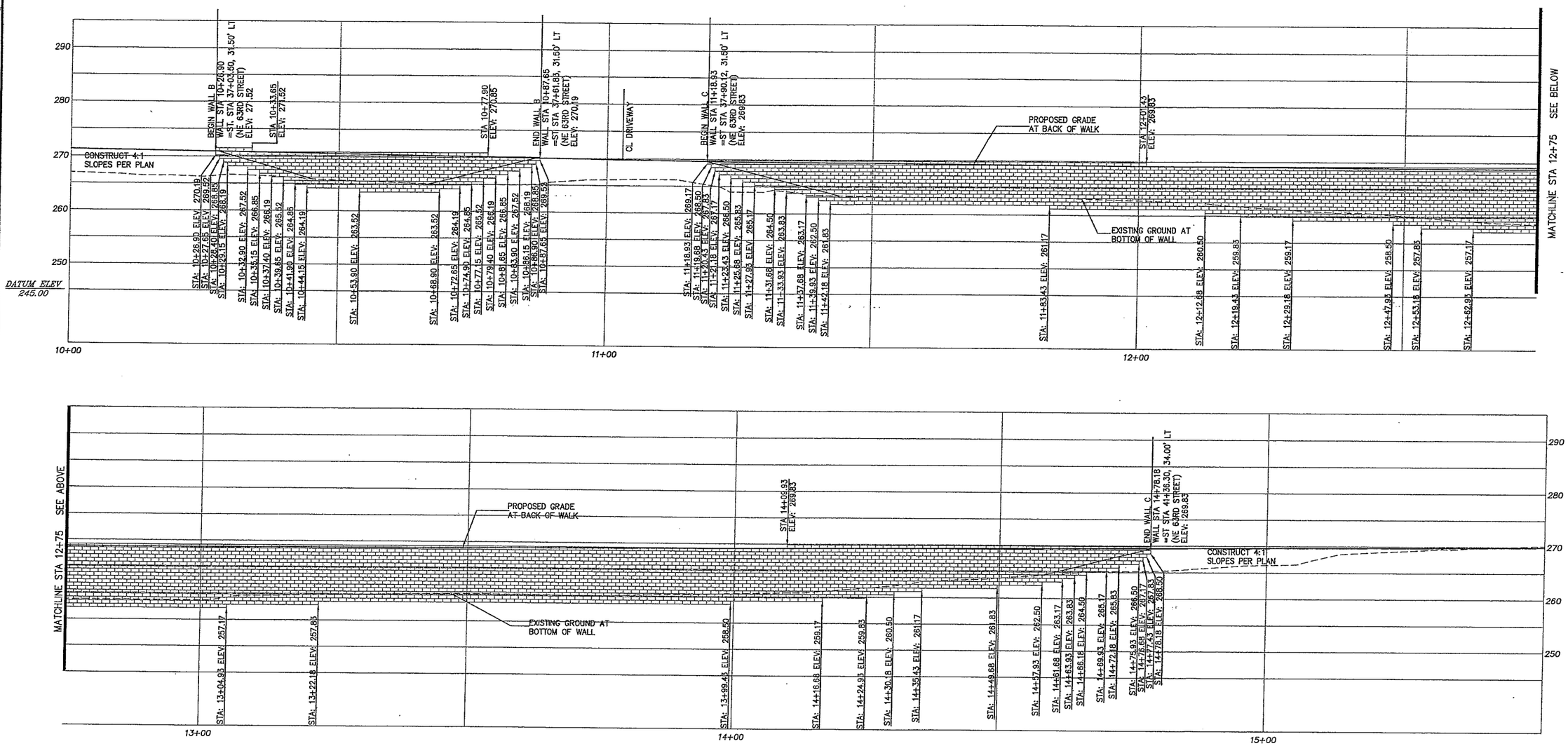

MODULAR BLOCK WALL "B" AND "C"

SCALE: 1"=10' HORIZONTAL AND VERTICAL

NOTE:
CONTRACTOR TO PROVIDE DESIGN PREPARED BY PROFESSIONAL ENGINEER. SEE SPECIAL PROVISIONS.

NOTES:

1. SEE SHEET RW5 FOR WALL DETAILS
2. OFFSETS SHOWN IN PROFILE ARE FROM PROPOSED CENTERLINE TO BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.
3. INSTALL CHAIN LINK FENCE TYPE 6 (BLACK VINYL COATED) PER DETAIL SHEET RW5, FOR LENGTH OF WALL.

DESIGNED:	SLW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 10'
VERT:	1" = 10'
DATE:	3/11/2005

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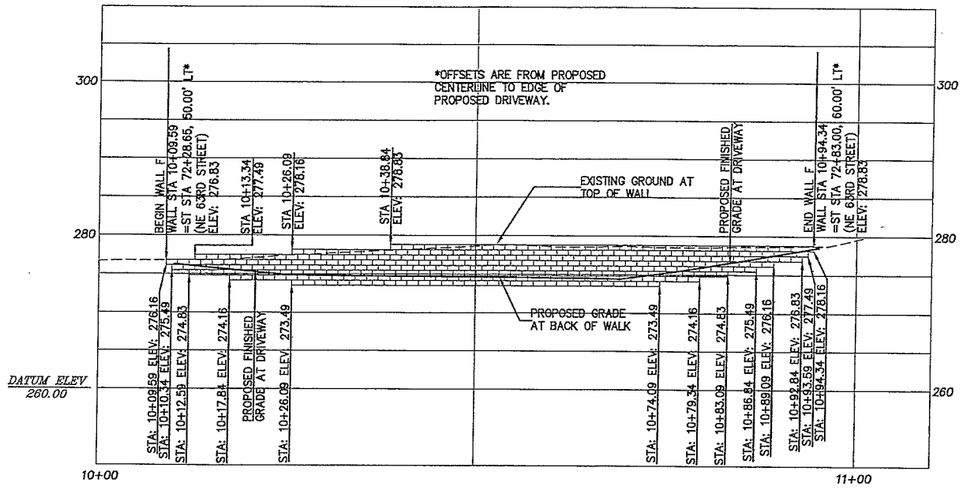
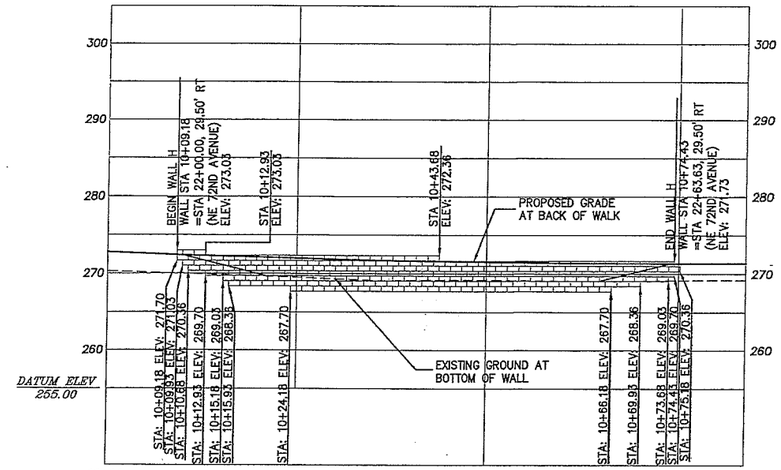


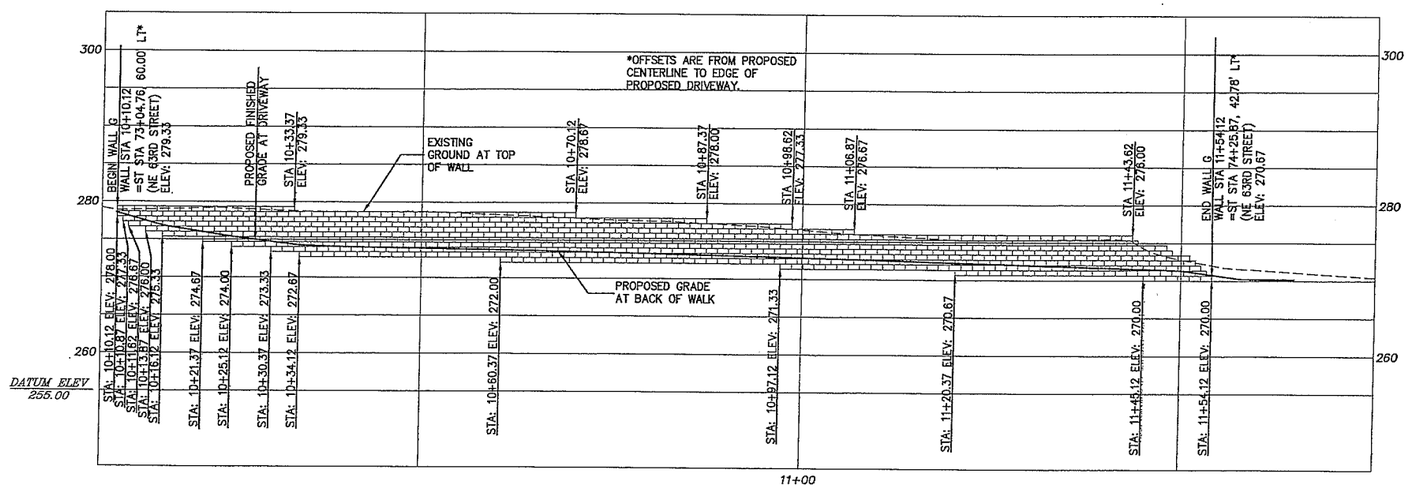
MODULAR BLOCK WALL "F"

SCALE: 1"=10' HORIZONTAL AND VERTICAL



MODULAR BLOCK WALL "H"

SCALE: 1"=10' HORIZONTAL AND VERTICAL



MODULAR BLOCK WALL "G"

SCALE: 1"=10' HORIZONTAL AND VERTICAL

NOTE:
CONTRACTOR TO PROVIDE DESIGN PREPARED BY PROFESSIONAL ENGINEER. SEE SPECIAL PROVISIONS.

NOTES:

1. SEE SHEET RW5 FOR WALL DETAILS
2. OFFSETS SHOWN IN PROFILE ARE FROM PROPOSED CENTERLINE TO BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.
3. INSTALL CHAIN LINK FENCE TYPE 6 (BLACK VINYL COATED) PER DETAIL SHEET RW5, FOR LENGTH OF WALL.

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DESIGNED: SLW
DRAWN: GME
CRP: 330422
HORIZ. 1" = 10'
VERT. 1" = 10'
DATE: 3/11/2005
DWG: RW3

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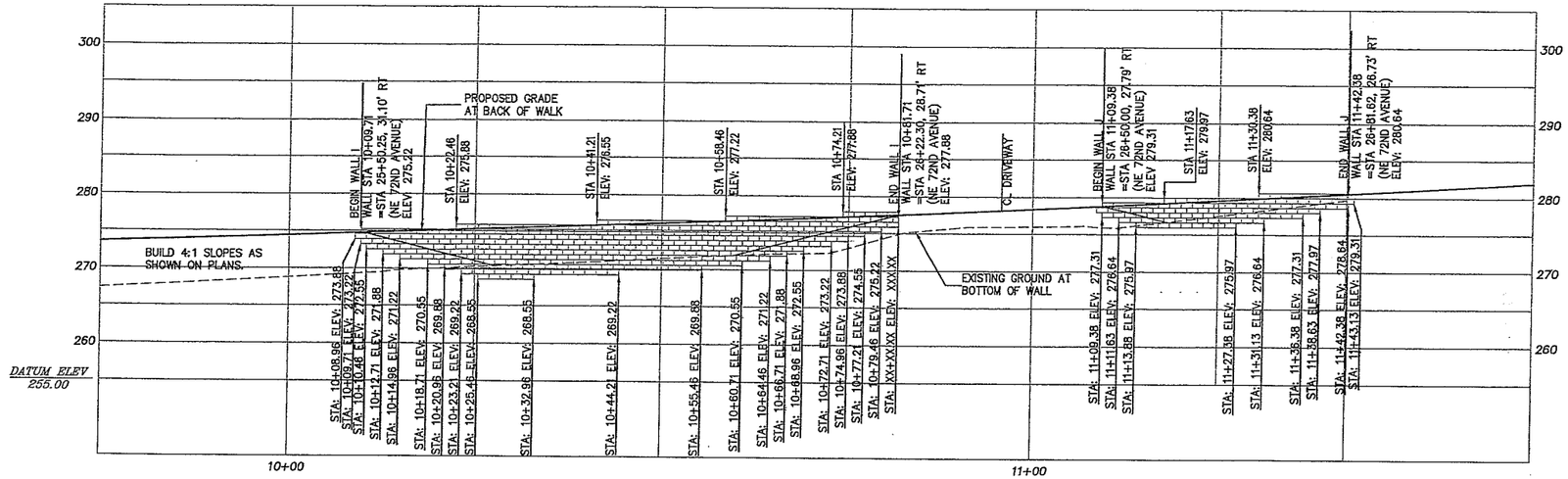
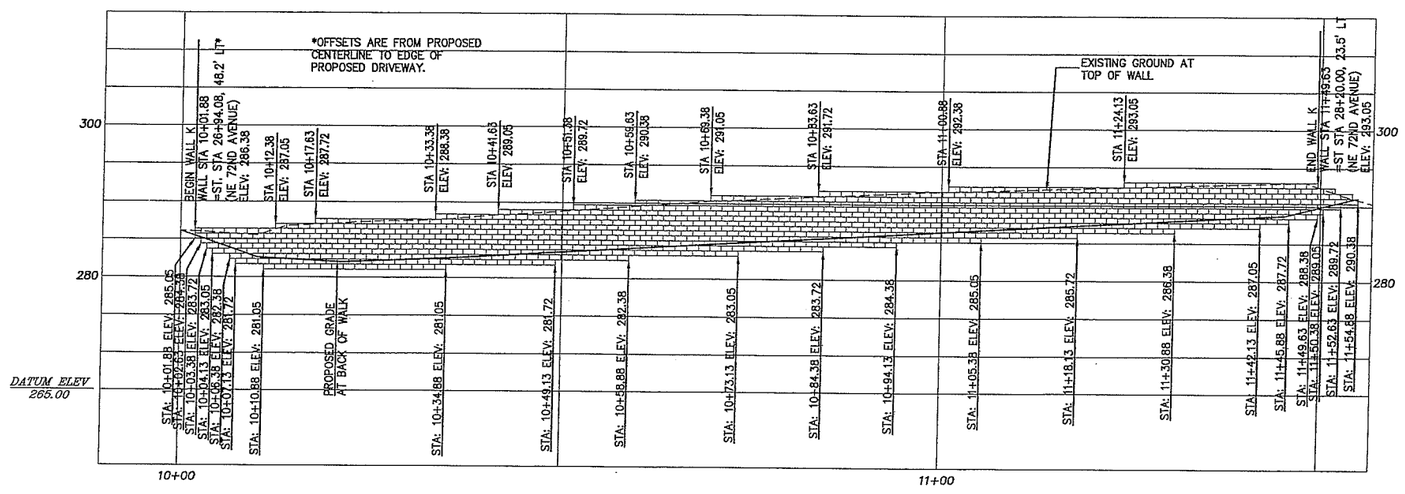


MODULAR BLOCK WALL "I," AND "J"

SCALE: 1"=10' HORIZONTAL AND VERTICAL



MODULAR BLOCK WALL "K"

SCALE: 1"=10' HORIZONTAL AND VERTICAL

NOTE:
CONTRACTOR TO PROVIDE DESIGN PREPARED BY PROFESSIONAL ENGINEER. SEE SPECIAL PROVISIONS.

NOTES:

1. SEE SHEET RW5 FOR WALL DETAILS
2. OFFSETS SHOWN IN PROFILE ARE FROM PROPOSED CENTERLINE TO BACK OF SIDEWALK, UNLESS OTHERWISE NOTED.
3. INSTALL CHAIN LINK FENCE TYPE 6 (BLACK VINYL COATED) PER DETAIL SHEET RW5, FOR LENGTH OF WALL.

DESIGNED:	SLW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 10'
VERT.	1" = 10'
DATE:	3/11/2005
DWG:	PW4

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GENERAL NOTES

Design criteria:

1. Retaining walls will be contractor design build
2. AASHTO Standard Specifications for Highway Bridges, 17th Ed., 2002
3. Factors of safety— Pullout 1.5
   Sliding 1.5
   Overturning 2.0
   Bearing 2.5
4. Wall foundations shall be designed for a maximum allowable bearing capacity of 2500 psf
5. Soil Properties— Retained Soil UW = 130 pcf, phi = 30 deg
   Granular Reinforced Backfill UW = 140 pcf phi = 35 deg
   Foundation Soil UW = 130 pcf phi = 30 deg
   Foundation soil in wetland areas UW = 120 pcf phi = 20 deg
6. Traffic live load surcharge on walls 6.5' or higher in a fill shall be 60 psf lateral pressure acting horizontally on back face of wall
7. Pedestrian live load surcharge shall be 85 psf acting vertically on sidewalk uniform for all walls in a fill situation.

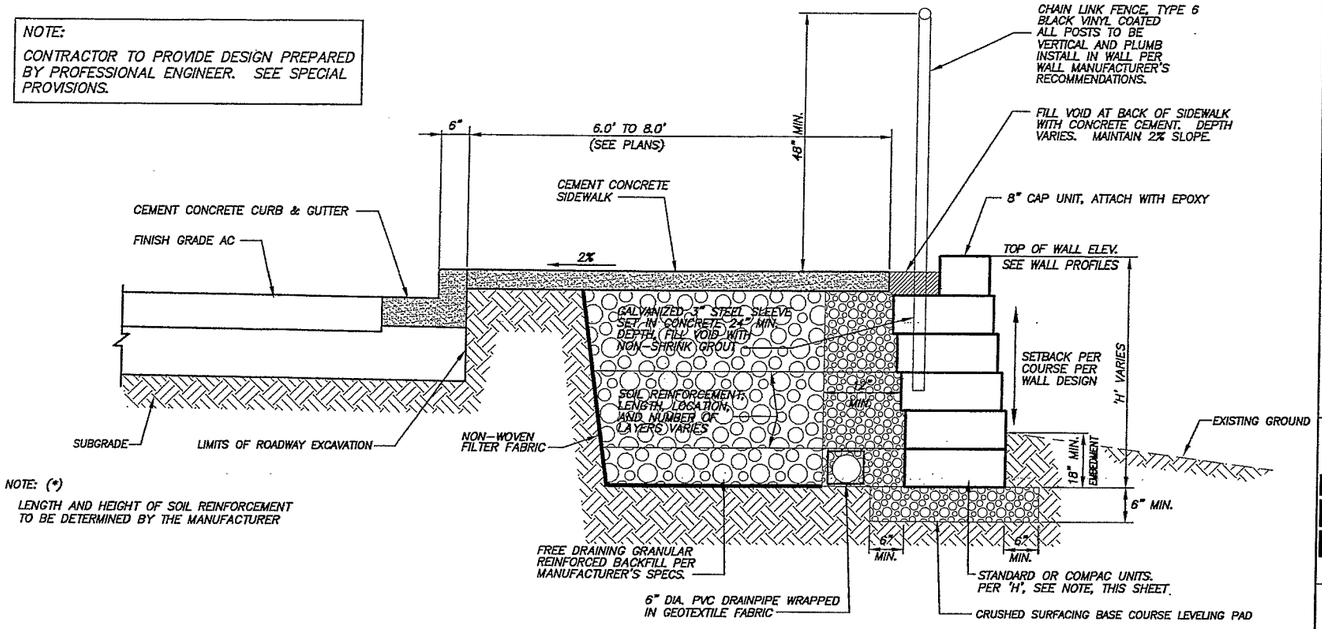
Construction Methods:

1. All work shall conform to the Washington Department of Transportation Standard Specifications, 2004 Edition
2. The contractor shall verify the existence of utilities in the field prior to commencement of retaining wall work
3. The contractor is responsible to coordinate all construction of obstructions/appurtences/utilities/drainage systems with the construction of the retaining walls
4. Foundations of walls located in a wetland area shall be overexcavated approximately 18" below required embedment depth and backfilled with compacted crushed rock (WSDOT Standard Specifications Gravel Backfill for Walls 9-03.12(2)).
5. Walls not requiring soil reinforcement shall have a minimum 12" layer of crushed surfacing base course placed directly behind the back face of wall
6. All walls shall have a 6" dia PVC drainpipe wrapped in a geotextile fabric located as shown in cross section. Pipes to daylight at end of wall or be connected to storm drain system as shown in Plans.

Materials

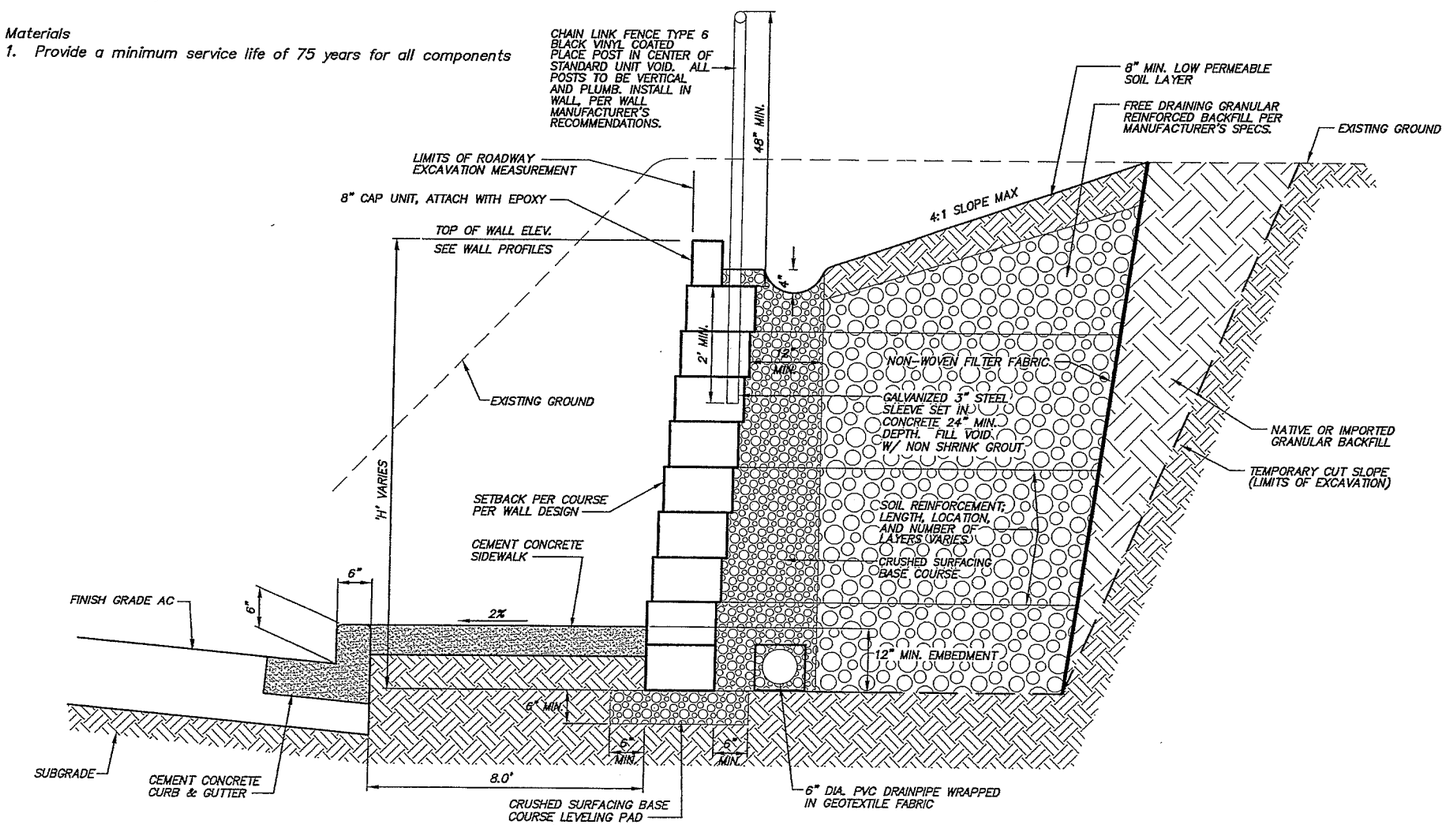
1. Provide a minimum service life of 75 years for all components

NOTE:
CONTRACTOR TO PROVIDE DESIGN PREPARED BY PROFESSIONAL ENGINEER. SEE SPECIAL PROVISIONS.

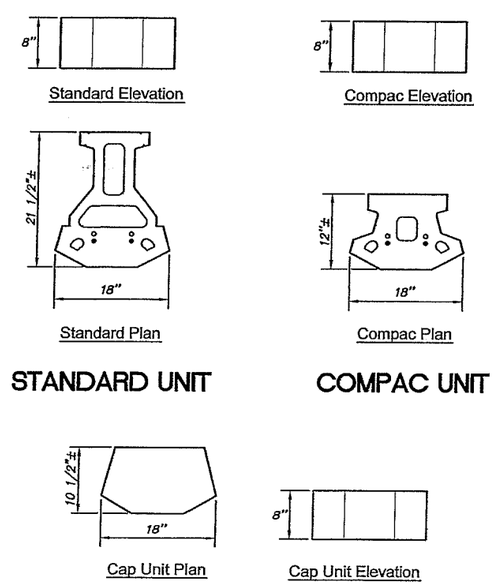


NOTE: (*)
LENGTH AND HEIGHT OF SOIL REINFORCEMENT TO BE DETERMINED BY THE MANUFACTURER

TYPICAL MODULAR BLOCK WALL (FILL)



TYPICAL MODULAR BLOCK WALL (CUT)



MASONRY BLOCKS
(KEYSTONE OR EQUIVALENT)

NOTES:
1. USE COMPAC UNITS WHERE "H"=3.0' MAX.
2. USE STANDARD UNITS WHERE "H" EXCEEDS 3.0'.

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	NA
VERT.	NA
DATE:	3/11/2005
DWG:	RW5

CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555 "It's the Law" NORTHWEST UTILITIES

ALFRED W. HEDMANN STATE OF WASHINGTON 22440 REGISTERED PROFESSIONAL ENGINEER

otak Incorporated
700 Washington St. Suite 401
Vancouver, WA 98660
Phone: (360) 737-8613

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

RETAINING WALL DETAILS

NOT FOR CONSTRUCTION

proud past, promising future
CLARK COUNTY WASHINGTON

VAN: LISAB 03/10/2005 4:52pm --> R:\DWG\C944S019.DWG

XREF LIST
Ltscale: 1

Resolved
C944X001_BORDER
PKW WASH
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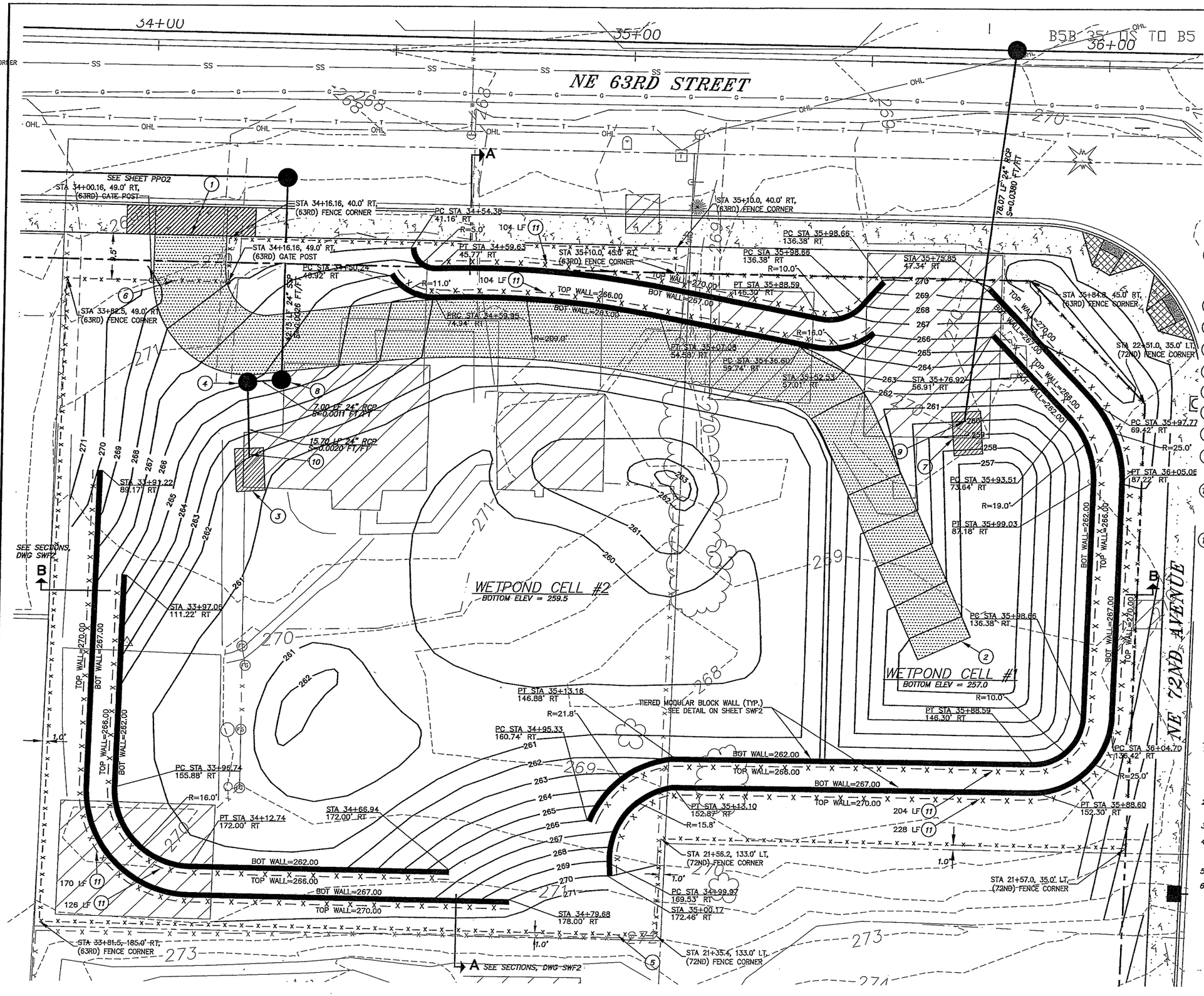
S944B101
S944B104
S944B106
MJRROADS
ROADS
C944X600
S944B200



CONSTRUCTION NOTES

1. N.E. 63RD ST. STA. 34+08.07, 39.50' RT BEGIN MAINTENANCE ROAD AT 14.3% MAX GRADE (7H:1V) FROM SLOPE TO POND BOTTOM. CONSTRUCT TO LIMITS SHOWN. SEE MAINTENANCE ROAD DETAIL DWG SWF2.
2. END MAINTENANCE ROAD N.E. 63RD ST. STA. 35+69.18, 122.61' RT
3. 8' X 6' OUTLET, CONSTRUCT OPEN CELL MASONRY GRID.
4. CATCH BASIN TYPE 2, STA 34+21.02, 69.76' RT. SEE SHEET SWF3 FOR DETAILS.
5. INSTALL 712 LF± CHAIN LINK FENCE TYPE I, 6 FT. HEIGHT (BLACK VINYL COATED), AS SHOWN ON PLAN.
6. 16' TYPE 1 CHAIN LINK GATE, SEE DWG D04.
7. 8' X 6' OUTFALL, CONSTRUCT OPEN CELL MASONRY GRID.
8. EMERGENCY OVERFLOW STRUCTURE. STA 34+28.04 69.15' RT. SEE SHEET SWF3 FOR DETAILS
9. POND INLET STA 35+71.77, 74.61' RT I.E. = 260.00 BEVEL END OF PIPE PER DETAIL, SHEET SWF5.
10. POND OUTLET STA 34+21.91, 85.44' RT I.E. = 262.03 BEVEL END OF PIPE PER DETAIL, SHEET SWF5. CONSTRUCT TRASH SCREEN PER DETAIL, SHEET SWF5.
11. INSTALL CHAIN LINK FENCE TYPE 6, 4 FT. HEIGHT (BLACK VINYL COATED), ALONG THE TOP OF MODULAR BLOCK WALL. 936 LF± TOTAL THIS SHEET.

GENERAL NOTES

1. SEE SPECIAL PROVISIONS FOR CONSTRUCTION REQUIREMENTS. WETPOND CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH SECTION V OF THE STORM WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON DATED AUGUST 2001.
2. REMOVE ALL TREES WITHIN FENCED LIMITS OF STORMWATER FACILITY.
3. SEE SHEET SWF2 FOR SECTION A–A AND B–B.
4. DEMOLISH AND REMOVE HOUSES, FENCES, AND OUT-BUILDINGS. DECOMMISSION UTILITIES AS DIRECTED.
5. SEE SHEET SWF2 FOR WALL SECTION.
6. FACILITY SHALL BE FUNCTIONING, PRIOR TO PAVING OF ROADWAY.

DESIGNED:	SC
DRAWN:	KW
CRP:	330422
HORIZ.	1" = 20'
VERT.	NA
DATE:	3/11/2005
DWG:	SWF1

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otak Incorporated
700 Washington St., Suite 401
Vancouver, WA 98660
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DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
STORMWATER FACILITY PLAN

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VAN: JMM 03/10/2005 8:13am --> R:\DWG\C944S020.DWG

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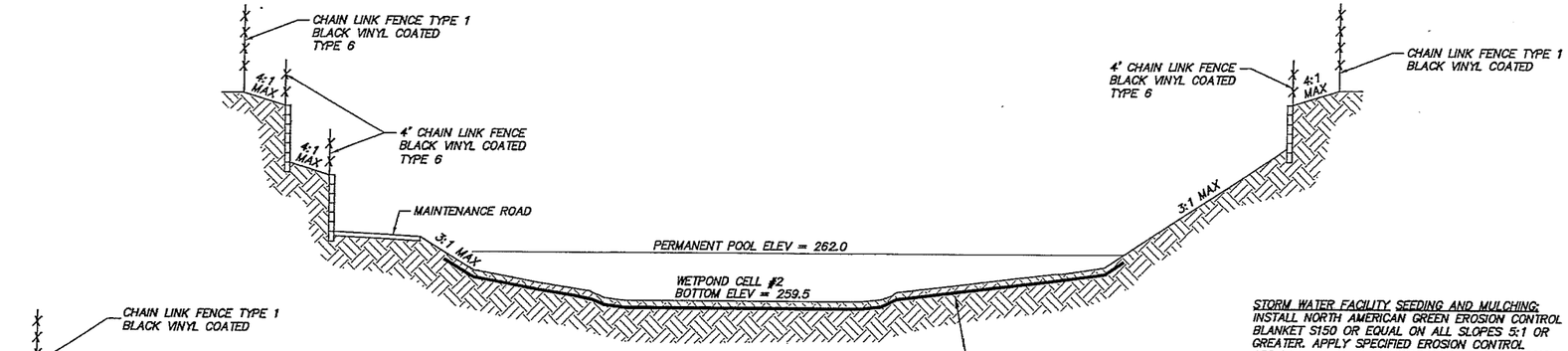
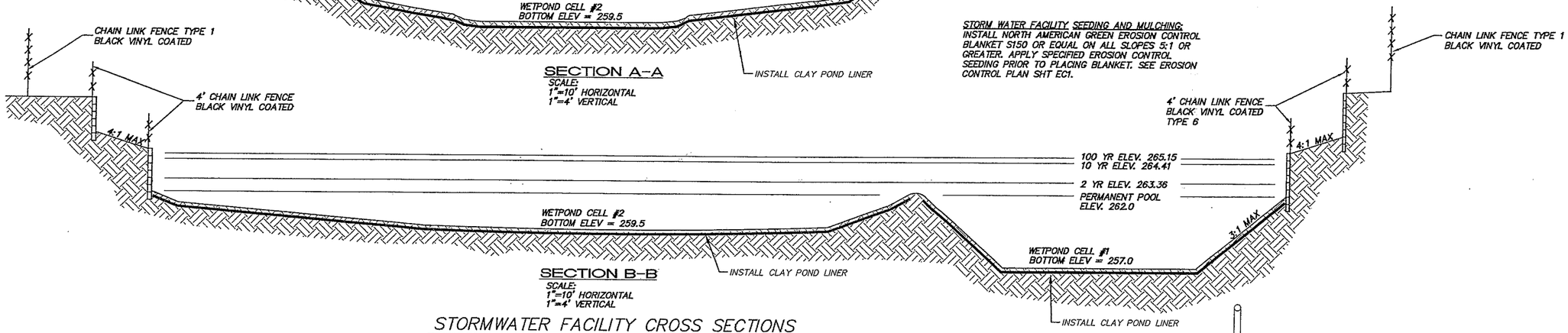
Resolved
C944X001_BORDER
PKW WASH



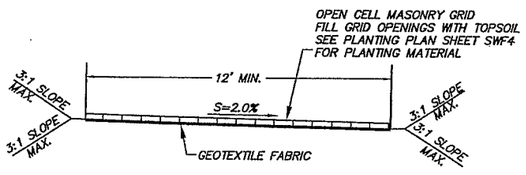
SECTION A-A
SCALE:
1"=10' HORIZONTAL
1"=4' VERTICAL

STORM WATER FACILITY SEEDING AND MULCHING:
INSTALL NORTH AMERICAN GREEN EROSION CONTROL BLANKET S150 OR EQUAL ON ALL SLOPES 5:1 OR GREATER. APPLY SPECIFIED EROSION CONTROL SEEDING PRIOR TO PLACING BLANKET. SEE EROSION CONTROL PLAN SHT EC1.



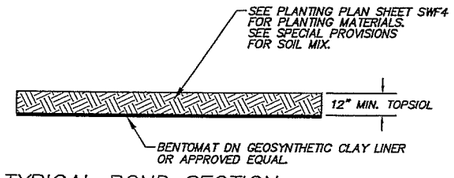
SECTION B-B
SCALE:
1"=10' HORIZONTAL
1"=4' VERTICAL

STORMWATER FACILITY CROSS SECTIONS



MAINTENANCE ROAD

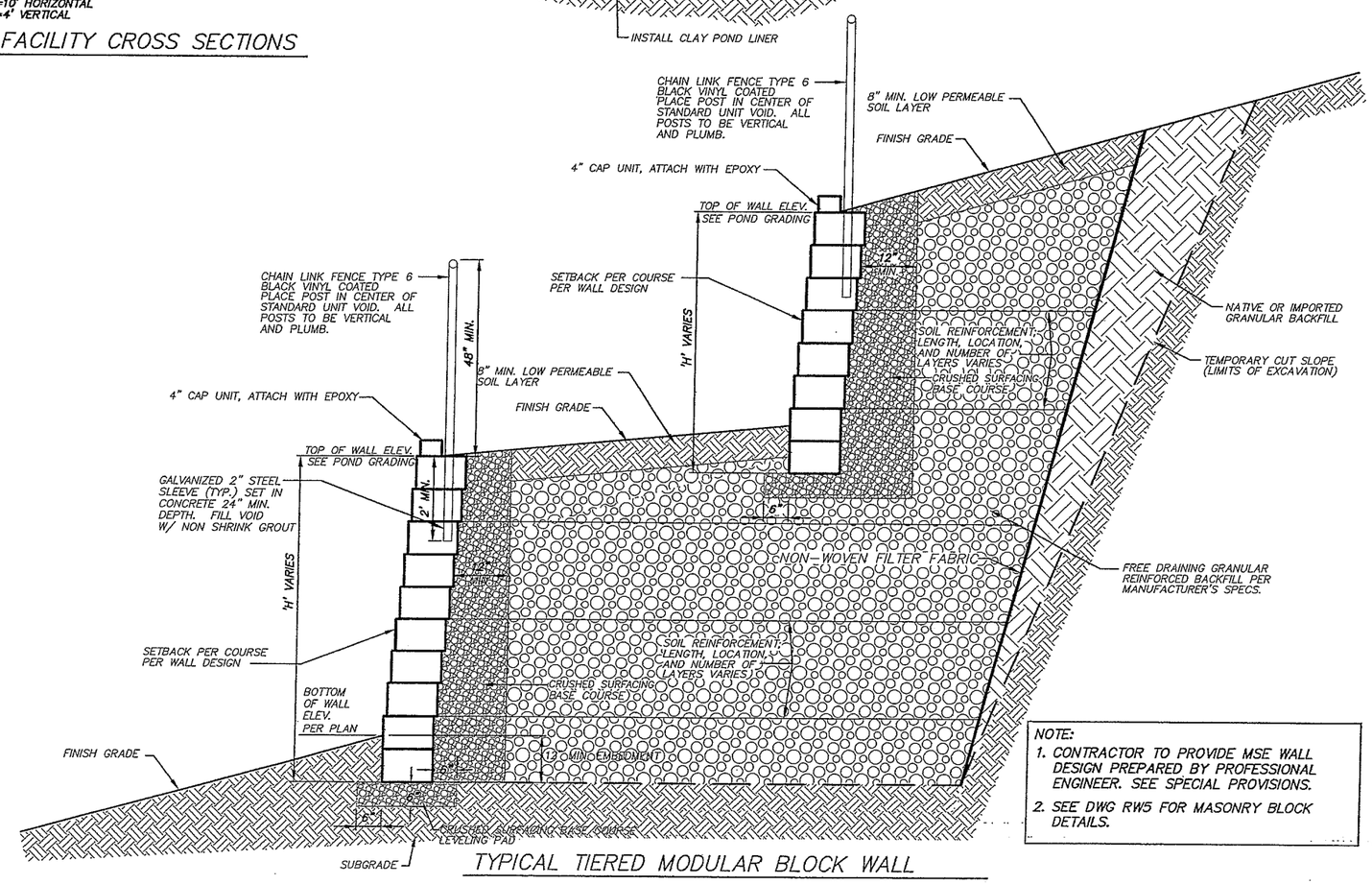
N.T.S.



TYPICAL POND SECTION

N.T.S.

NOTE: CLAY LINER TO BE INSTALLED ON COMPACTED SMOOTH SUBGRADE, FREE OF IRREGULARITIES OR SHARP ROCKS LARGER THAN 2 INCHES. SURFACE AND SUBGRADE PREPARATION SHALL MEET MANUFACTURER'S SPECIFICATIONS.



NOTE:
1. CONTRACTOR TO PROVIDE MSE WALL DESIGN PREPARED BY PROFESSIONAL ENGINEER. SEE SPECIAL PROVISIONS.
2. SEE DWG RW5 FOR MASONRY BLOCK DETAILS.

TYPICAL TIERED MODULAR BLOCK WALL

DESIGNED:	SC
DRAWN:	KW
CRP:	330422
HORIZ.	NA
VERT.	NA
DATE:	3/11/2005
DWG:	SWF2

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STATE OF WASHINGTON
KYLE WIEDEMANN
REGISTERED PROFESSIONAL ENGINEER
EXPIRES:

otak Incorporated
700 Washington St. Suite 401
Vancouver, WA 98660
Phone: (360) 737-8613
Fax:

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
STORMWATER FACILITY
SECTION DETAILS

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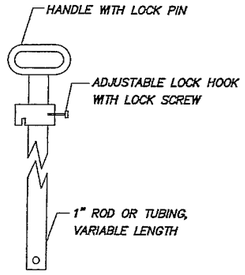
WASHINGTON

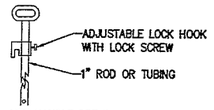
VAN: LISAB 03/10/2005 4:58pm ---> R:\DWG\C944S021.DWG

XREF LIST
Ltscale: 1
Resolved
C944X001_BORDER
PKW WASH

ORIFICE



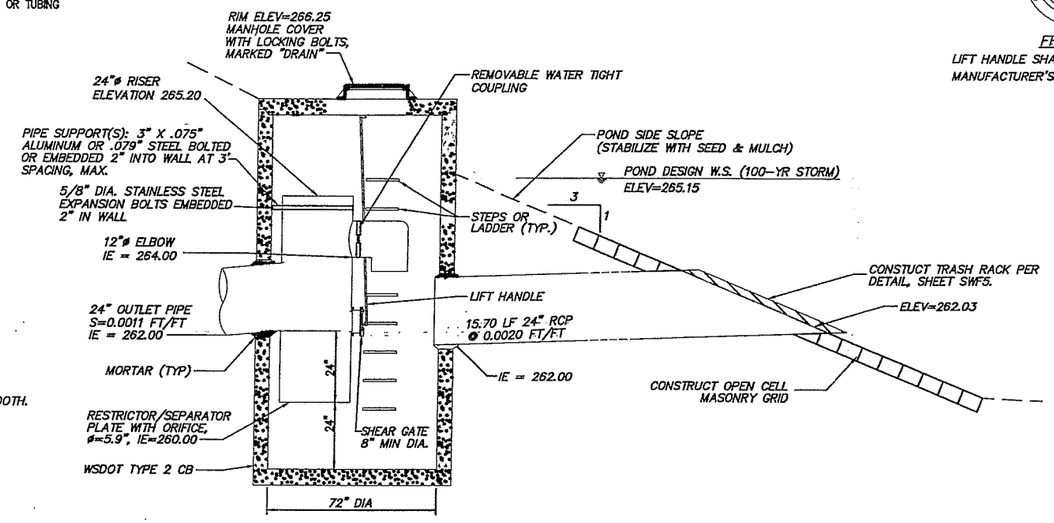
LIFT HANDLE



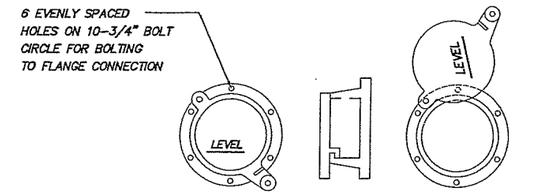
LIFT HANDLE DETAIL

NOTES

1. PIPE SUPPORTS AND RESTRICTOR/SEPARATOR SHALL BE CONSTRUCTED OF THE SAME MATERIAL AND BE ANCHORED AT A MAXIMUM SPACING OF 36". ATTACH PIPE SUPPORTS TO MANHOLE WITH 5/8" STAINLESS STEEL EXPANSION BOLTS OR EMBED SUPPORTS 2" INTO MANHOLE WALL.
2. THE VERTICAL RISER STEM OF THE RESTRICTOR/SEPARATOR SHALL BE THE SAME DIAMETER AS THE HORIZONTAL OUTLET PIPE, WITH A MINIMUM 8" DIAMETER.
3. THE FLOW RESTRICTOR/SEPARATOR SHALL BE FABRICATED FROM ONE OF THE FOLLOWING MATERIALS:
   CORRUGATED ALUMINUM ALLOY DRAIN PIPE
   CORRUGATED ALUMINIZED STEEL DRAIN PIPE
   ALUMINUM ALLOY FLAT SHEET, IN ACCORDANCE WITH ASTM B 209M, 5052 H32 OR EPS
4. MULTI-ORIFICE ELBOWS MAY BE LOCATED AS SHOWN OR ALL ON ONE SIDE OF RISER TO ASSURE LADDER CLEARANCE. SIZE OF ELBOWS AND PLACEMENT TO BE SPECIFIED IN THE CONTRACT.
5. RESTRICTOR PLATE WITH ORIFICE AS SPECIFIED IN THE CONTRACT. OPENING IS TO BE CUT ROUND AND SMOOTH.
6. SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B.
   LIFT HANDLE MAY BE SOLID ROD OR HOLLOW TUBING WITH ADJUSTABLE HOOK AS REQUIRED.
   NEOPRENE RUBBER GASKET REQUIRED BETWEEN RISER MOUNTING FLANGE AND GATE FLANGE.
   MATING SURFACES OF LID AND BODY SHALL BE MACHINED FOR PROPER FIT.
   FLANGE MOUNTING BOLTS SHALL BE 3/8" DIAMETER STAINLESS STEEL.
7. SHEAR GATE MAXIMUM OPENING SHALL BE CONTROLLED BY LIMITED HINGE MOVEMENT, STOP TAB OR SOME OTHER DEVICE.
8. ALTERNATE SHEAR GATE DESIGNS ARE ACCEPTABLE, IF MATERIAL SPECIFICATIONS ARE MET AND FLANGE BOLT PATTERN MATCHES.



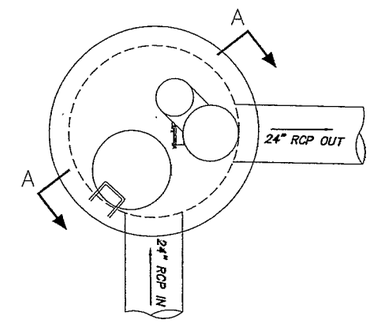
SECTION A-A



FRONT SIDE MAXIMUM OPENING OF GATE

LIFT HANDLE SHALL BE ATTACHED PER MANUFACTURER'S RECOMMENDATIONS

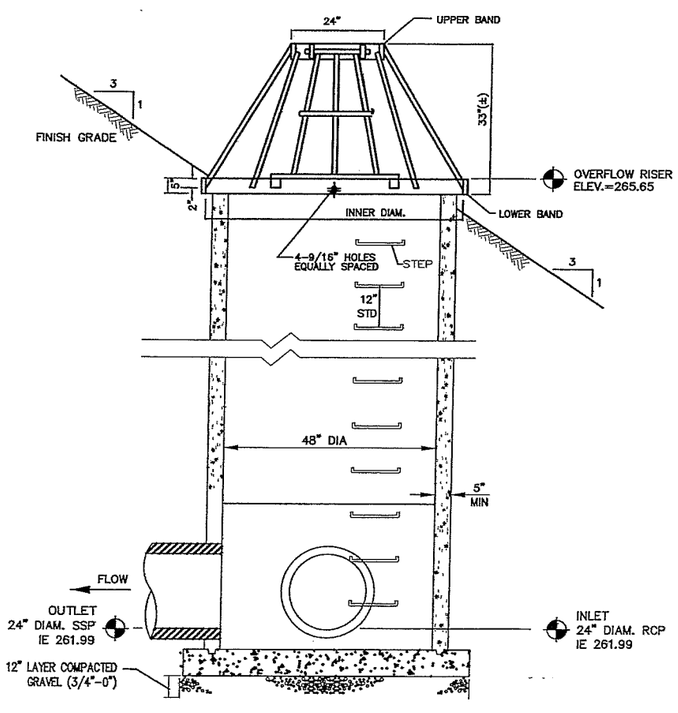
CLEANOUT/SHEAR GATE
N.T.S.

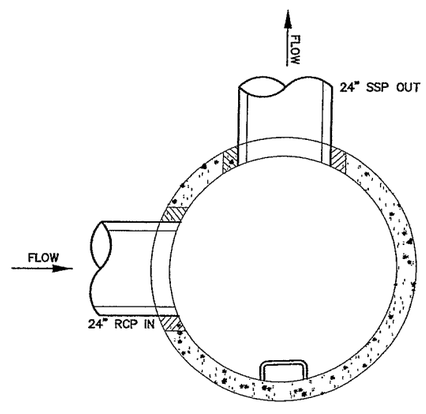


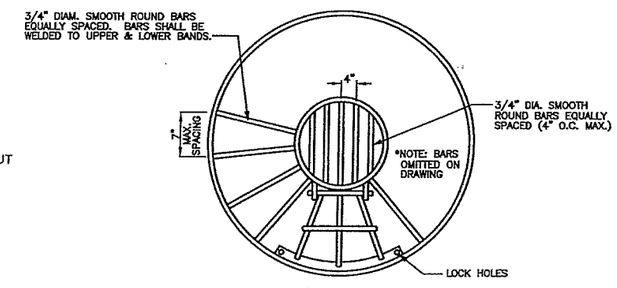
PLAN VIEW

CATCH BASIN TYPE 2

STA. 34+21.02, 69.79' RT NE 63RD STREET
SEE PLAN VIEW SHEET SWF1 FOR DETAILS
NTS







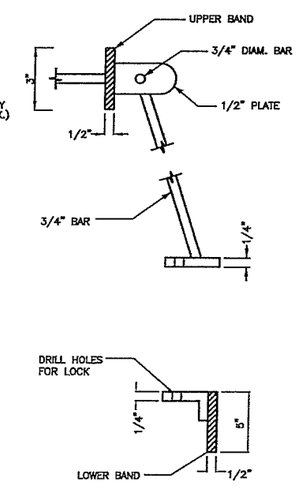
PLAN

MH	INNER DIAM.
48"	58"
54"	65"
60"	72"
72"	86"
96"	114"

NOTES:

1. ALL STEEL IN PLATES, BARS AND BANDS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
2. STEEL DEBRIS CAGE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 (AASHTO M111).
3. ALUMINUM IS AN OPTIONAL CAGE MATERIAL.

DEBRIS CAGE DETAIL



ENTRY GATE DETAIL

EMERGENCY OVERFLOW MANHOLE

STA. 34+28.04, 69.15' RT NE 63RD STREET
SEE PLAN VIEW SHEET SWF1 FOR DETAILS
NTS

DESIGNED:	SC
DRAWN:	BDS
CRP:	330422
HORIZ.	1" = 20'
VERT.	NA
DATE:	3/11/2005
DWG:	SWF3

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PAUL A. WIEDEMANN
STATE OF WASHINGTON
22440
PROFESSIONAL ENGINEER

otak Incorporated
700 Washington St. Suite 401
Vancouver, WA 98660
Phone: (360) 737-8813

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

STORMWATER FACILITY
CONTROL STRUCTURE DETAILS

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WASHINGTON

ANI: JIMM 03/10/2005 8:15am --> R:\DWG\C944S022.DWG

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C944x600
Unresolved
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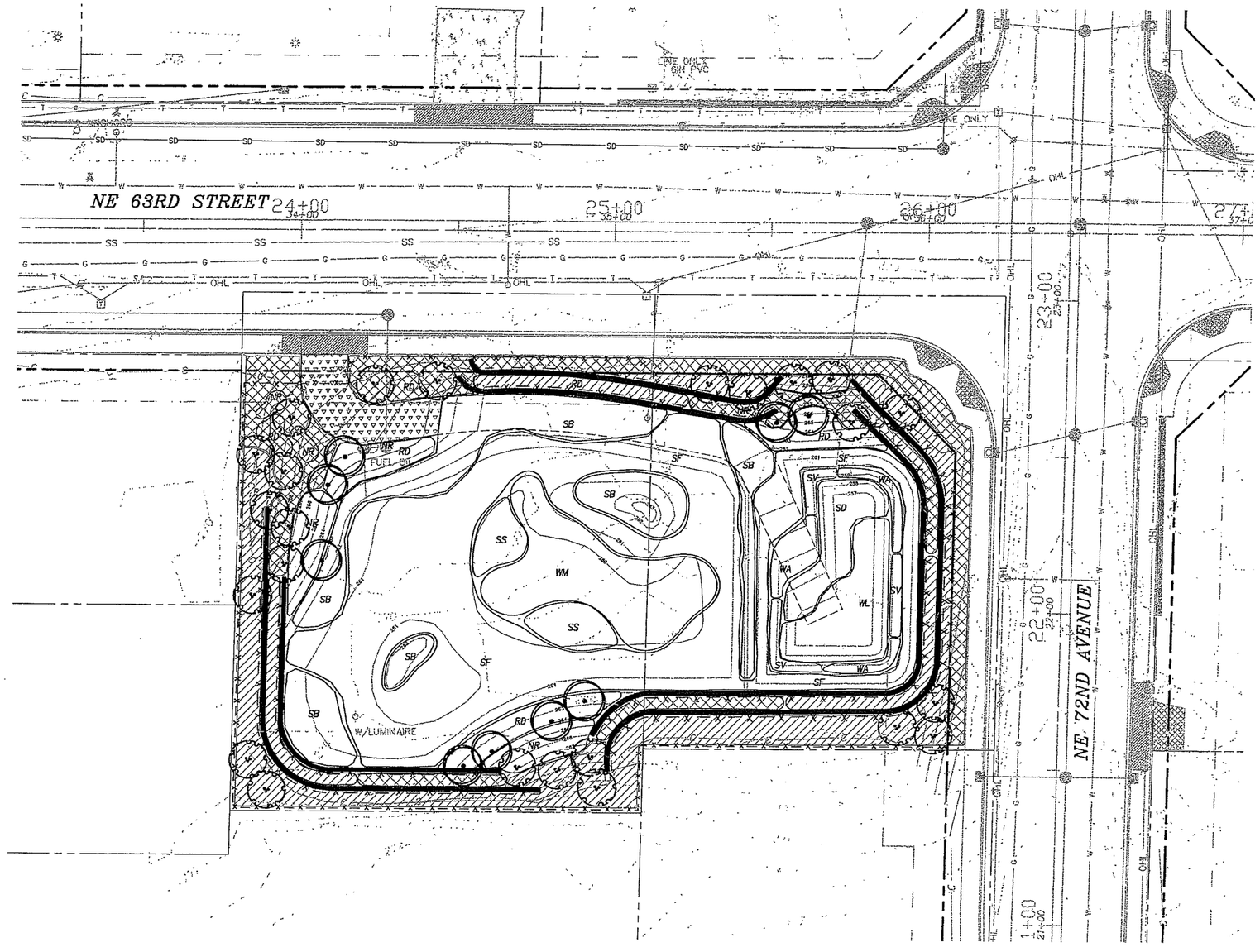
LAsketch-2



WETPOND PLANT LIST

CODE/ SYMBOL	COMMON NAME Botanical name	SIZE / SPACING REMARKS
	WESTERN SERVICEBERRY *Amelanchier alnifolia*	5 FT. HT., B&B
	CASCARA *Rhamnus purshiana*	5 FT. HT., B&B
NR	NOOTKA ROSE *Rosa nutkana*	2 GAL., 3 FT. O.C.
RD	RED OSIER DOGWOOD *Cornus stolonifera*	2 GAL., 3 FT. O.C.
SB	SAWBEAK SEDGE *Carex stipata*	12 IN. O.C.
SD	SPATTERDOCK *Nuphar polysepalum*	12 IN. O.C.
SF	SMALL-FRUITED BULRUSH *Scirpus microcarpus*	12 IN. O.C.
SS	SLOUGH SEDGE *Carex obnupta*	12 IN. O.C.
SV	SOFTSTEM BULRUSH *Scirpus validus*	12 IN. O.C.
WA	WAPATO *Sagittaria latifolia 'Latifolia'*	12 IN. O.C.
WL	WHITE WATERLILY *Nymphaea odorata*	24 IN. O.C.
WM	WESTERN MANNAGRASS *Glyceria occidentalis*	12 IN. O.C.
	KINNIKINNICK *Arctostaphylos uva-ursi*	1 GAL., 2-1/2 FT. O.C.
	CREEPING MAHONIA *Mahonia repens*	1 GAL., 2-1/2 FT. O.C.
	EROSION CONTROL SEED MIX See Sheet EC1	

SCALE IN FEET
20 0 20 40

STORM WATER FACILITY SEEDING AND MULCHING:
INSTALL NORTH AMERICAN GREEN EROSION CONTROL BLANKET S150 OR EQUAL ON ALL SLOPES 5:1 OR GREATER. APPLY EROSION CONTROL SEEDING PRIOR TO PLACING BLANKET. SEE EROSION CONTROL PLAN SHT EC1

DESIGNED:	SC
DRAWN:	KW
CRP:	330422
HORIZ.	1" = 20'
VERT.	NA
DATE:	3/11/2005
DWG:	SWF4

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555
"It's the Law"
NORTHWEST UTILITIES

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
DAVID D. HAYNES

otak
Incorporated
700 Washington St., Suite 401
Vancouver, WA 98660
Phone: (360) 787-0803

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
STORMWATER FACILITY
LANDSCAPE PLAN

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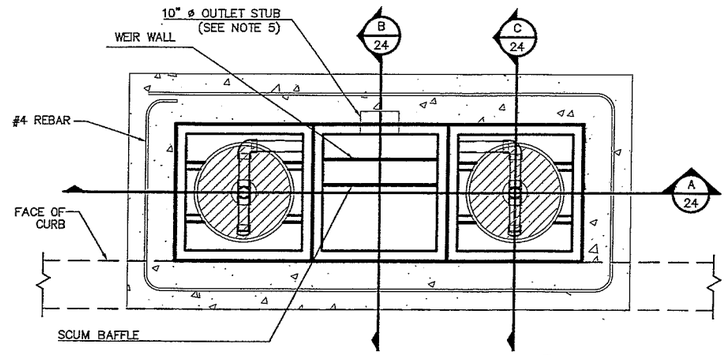
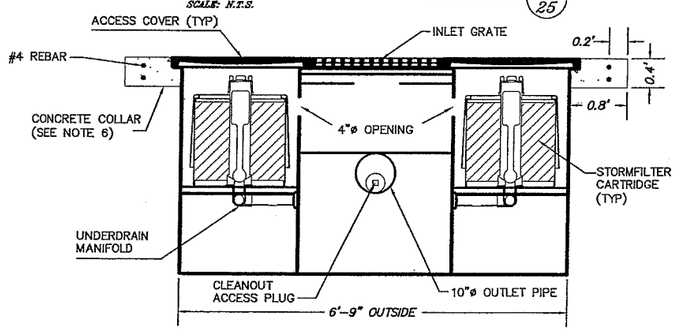
CLARK COUNTY WASHINGTON

VAN: GRANITE 03/10/2005 3:26pm ---> R:\DWG\C944S023.DWG

XREF LIST
Ltscale: 1
Resolved
C944X001_BORDER
PKW WASH



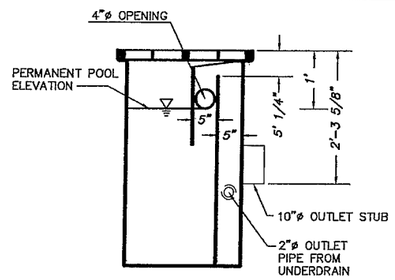
2-CART. CATCHBASIN - PLAN VIEW (1/25)
SCALE: N.T.S.



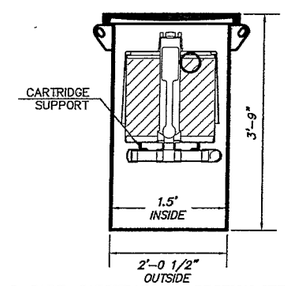
2-CART. CATCHBASIN - SECTION VIEW (A-A/25)
SCALE: N.T.S.

GENERAL NOTES

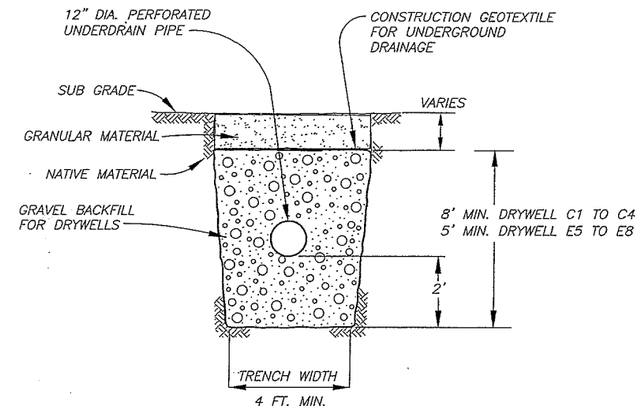
1.) STORMFILTER BY STORMWATER MANAGEMENT INC., PORTLAND, OREGON 800/548-4667.
2.) FILTERS TO BE SIPHON-ACTUATED AND SELF-CLEANING.
3.) STEEL STRUCTURE TO BE MANUFACTURED OF ¼" STEEL PLATE.
4.) STORMFILTER REQUIRES 2.3' OF DROP FROM RIM TO OUTLET. INLET (IF APPLICABLE) AND OUTLET PIPING TO BE SPECIFIED BY ENGINEER AND PROVIDED BY CONTRACTOR.
5.) CBSF EQUIPPED WITH 4" LONG STUBS FOR INLET (IF APPLICABLE) AND OUTLET PIPING. STANDARD OUTLET STUB IS 8" IN DIAMETER. CONNECTION TO COLLECTION PIPING CAN BE MADE USING FLEXIBLE COUPLING BY CONTRACTOR.
6.) FOR H-20 LOAD RATING, CONCRETE COLLAR IS REQUIRED. CONCRETE COLLAR WITH QUANTITY (2) #4 REINFORCING BARS TO BE PROVIDED BY CONTRACTOR.
7.) ALL STORMFILTERS REQUIRE REGULAR MAINTENANCE. REFER TO OPERATION AND MAINTENANCE GUIDELINES FOR DETAILS.
8.) STANDARD DETAIL SHOWS MAXIMUM NUMBER OF CARTRIDGES. EXACT NUMBER REQUIRED TO BE SPECIFIED ON SITE PLANS.



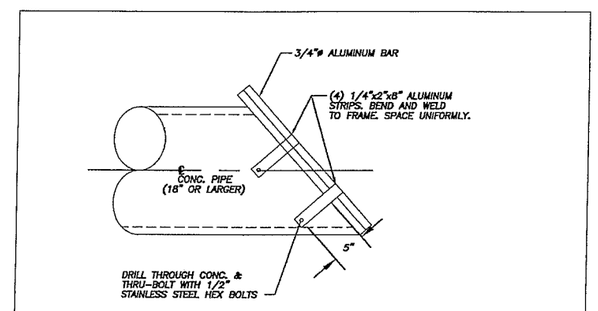
2-CART. CATCHBASIN - SECTION VIEW (B-B/25)
SCALE: N.T.S.

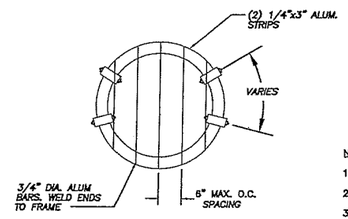


2-CART. CATCHBASIN - SECTION VIEW (C-C/25)
SCALE: N.T.S.



INFILTRATION TRENCH (PUBLIC)
NTS





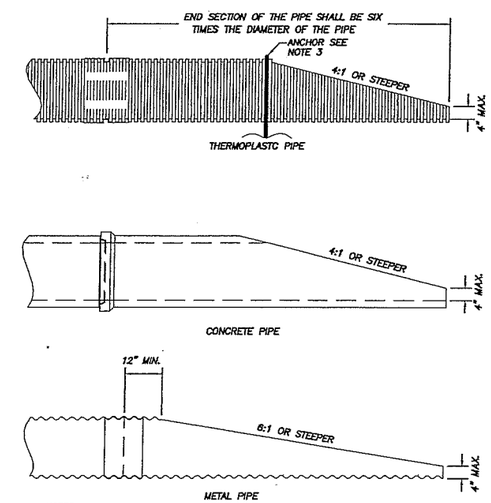
NOTES:
1. WELD AT ALL JOINTS.
2. SHOP DRAWING REQUIRED.
3. USE WITH PLASTIC PIPE REQUIRES MODIFICATION TO BE REVIEWED AND APPROVED BY COUNTY ENGINEER.

NO.	REVISIONS	DATE	BY

DWG: D25.DWG

Department of Public Works
CLARK COUNTY WASHINGTON
proud past, promising future

TRASH SCREEN
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 — DATE
STANDARD D25
PLAN No.
DESIGNED
DRAWN
DATE 10/04/02



NOTES:
1. THE CULVERT ENDS SHALL BE BEVELED TO MATCH THE EMBANKMENT OR DITCH SLOPE, WITHOUT EXCEEDING THE LIMITS SHOWN ON THE PLAN.
2. FIELD CUT OF CULVERT ENDS IS PERMITTED, WHEN APPROVED BY THE ENGINEER. ALL FIELD CUT PIPE CULVERTS SHALL BE TREATED WITH TREATMENT SHOWN IN THE STANDARD SPECIFICATION OR GENERAL SPECIAL PROVISIONS.
3. THE END OF THERMOPLASTIC PIPE SHALL BE ANCHORED. SEE STD. PLAN D22
4. FOR PIPES 18" OR LARGER, TRASH SCREEN REQUIRED. SEE STD. PLAN D25

NO.	REVISIONS	DATE	BY

DWG: D24.DWG

Department of Public Works
CLARK COUNTY WASHINGTON
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BEVELED END SECTION
APPROVED
Peter Capell — COUNTY ENGINEER — 01/01/04 — DATE
STANDARD D24
PLAN No.
DESIGNED
DRAWN
DATE 10/04/02

DESIGNED:	SC
DRAWN:	KW
CRP:	330422
HORIZ.	
VERT.	NA
DATE:	3/11/2005
DWG:	SWF5

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PAMELA J. DEMANN
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otak Incorporated
700 Washington St., Suite 401
Vancouver, WA 98660
(360) 696-0672

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
STORMWATER FACILITY
MISC. DETAILS

NOT FOR CONSTRUCTION

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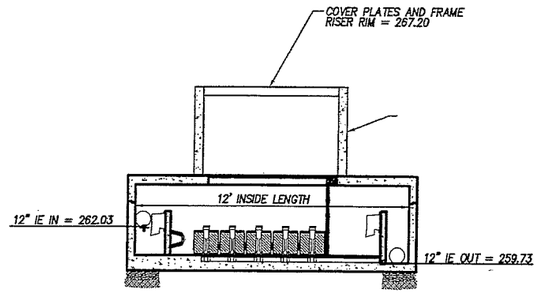
CLARK COUNTY WASHINGTON

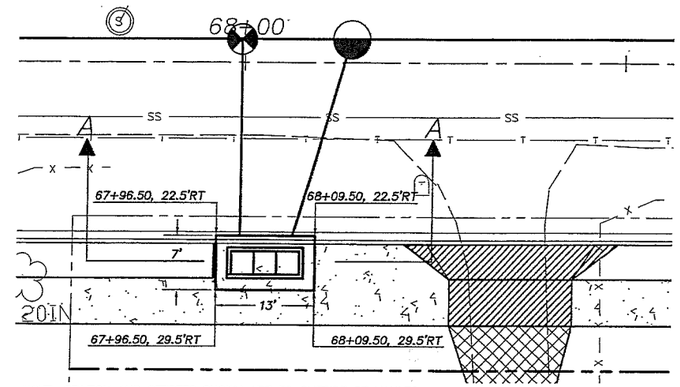
PAN: GRANITE 03/10/2005 2:43pm —> R:\DWG\C944S025.DWG

XREF LIST
Ltscale: 10
Resolved
C944X001_BORDER
PKW WASH
C944x500
S944b104
S944b106
S944B200

NOTE: STORMFILTER CONFIGURATION SHOWN HERE FOR INNER DIMENSIONS AND PIPE CONNECTION CONFIGURATION ONLY. REFER TO MANUFACTURER FOR FOR FLOW CARTRIDGE LAYOUT, PLACEMENT, AND OUTER STRUCTURAL DIMENSIONS. A MINIMUM OF 11 CARTRIDGES SHALL BE INSTALLED FOR WATER QUALITY VAULT NO. C6 ON SHEET PP09.



SECTION A–A
N.T.S.

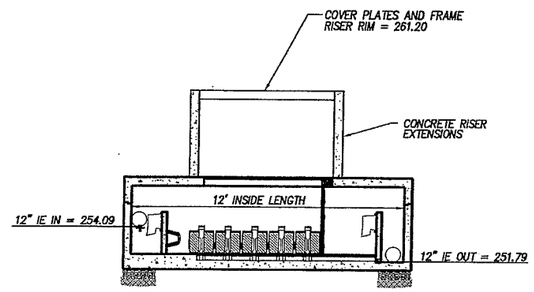


NOTE: STATION AND OFFSETS SHOWN ARE TO OUTSIDE OF VAULTS.

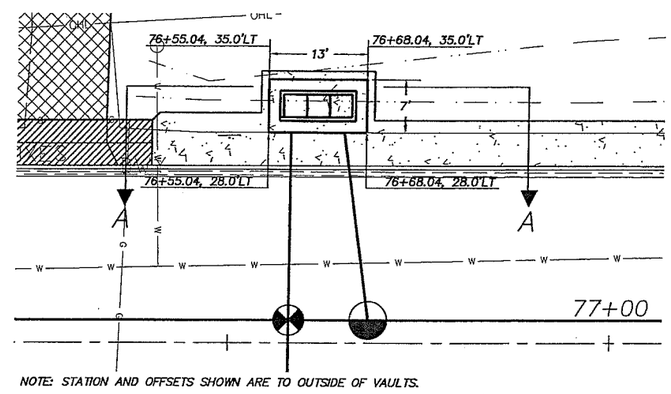
PLAN
ALSO SEE SHEET PP09
SCALE: 1"=10'

STORM FILTER™ WATER QUALITY VAULT NO. C6

NOTE: STORMFILTER CONFIGURATION SHOWN HERE FOR INNER DIMENSIONS AND PIPE CONNECTION CONFIGURATION ONLY. REFER TO MANUFACTURER FOR FOR FLOW CARTRIDGE LAYOUT, PLACEMENT, AND OUTER STRUCTURAL DIMENSIONS. A MINIMUM OF 6 CARTRIDGES SHALL BE INSTALLED FOR WATER QUALITY VAULT NO. E9 ON SHEET PP10.



SECTION A–A
N.T.S.

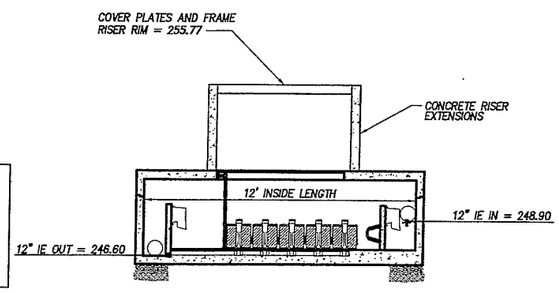


NOTE: STATION AND OFFSETS SHOWN ARE TO OUTSIDE OF VAULTS.

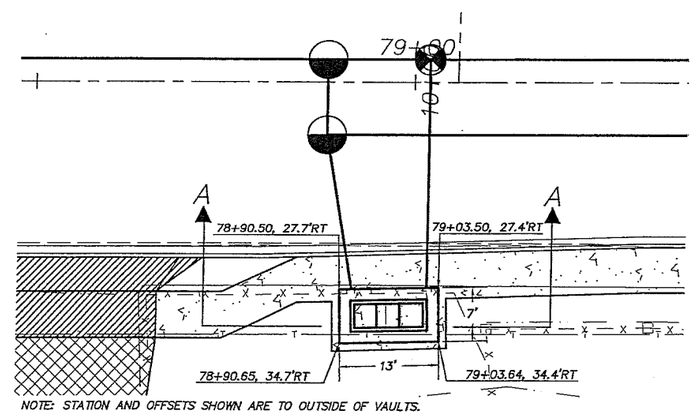
PLAN
ALSO SEE SHEET PP10
SCALE: 1"=10'

STORM FILTER™ WATER QUALITY VAULT NO. E9

NOTE: STORMFILTER CONFIGURATION SHOWN HERE FOR INNER DIMENSIONS AND PIPE CONNECTION CONFIGURATION ONLY. REFER TO MANUFACTURER FOR FOR FLOW CARTRIDGE LAYOUT, PLACEMENT, AND OUTER STRUCTURAL DIMENSIONS. A MINIMUM OF 9 CARTRIDGES SHALL BE INSTALLED FOR WATER QUALITY VAULT NO. E4 ON SHEET PP11.



SECTION A–A
N.T.S.



NOTE: STATION AND OFFSETS SHOWN ARE TO OUTSIDE OF VAULTS.

PLAN
ALSO SEE SHEET PP11
SCALE: 1"=10'

STORM FILTER™ WATER QUALITY VAULT NO. E4

DESIGNED:	SC
DRAWN:	KW
CRP:	330422
HORIZ.	AS NOTED
VERT.	NA
DATE:	3/11/2005

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FRANK A. WILDEMANN STATE OF WASHINGTON 22440 REGISTERED PROFESSIONAL ENGINEER

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Vancouver, WA 98660
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DIVISION
DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
WATER QUALITY VAULT DETAILS

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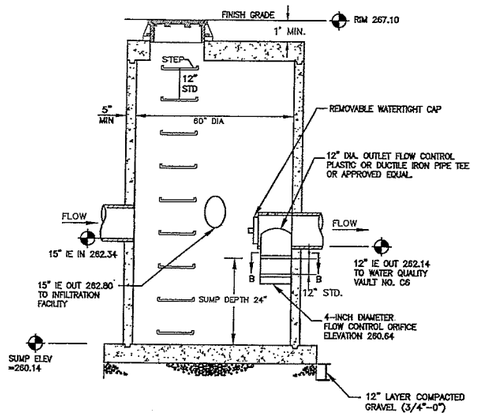
PLAN: JMAN 03/10/2005 8:15am --> R:\DWG\C944S024.DWG

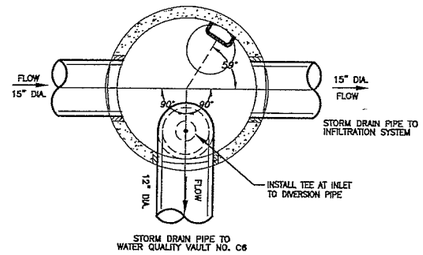
REF LIST
tscale: 1
esolvad
944X001_BORDER
KW WASH



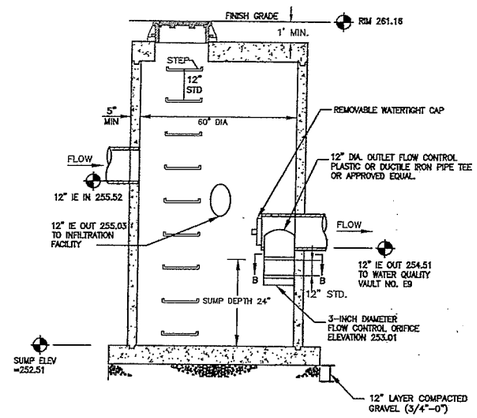
SDMH C5 - CATCH BASIN, TYPE 2 W/ FLOW SPLITTER

NOT TO SCALE

SEE DWG PP09 FOR PLAN VIEW



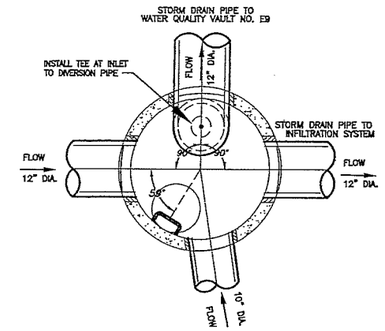
PLAN VIEW



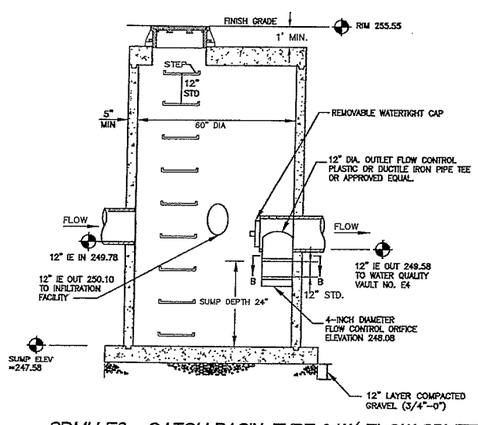
SDMH E10 - CATCH BASIN, TYPE 2 W/ FLOW SPLITTER

NOT TO SCALE

SEE DWG PP10 FOR PLAN VIEW



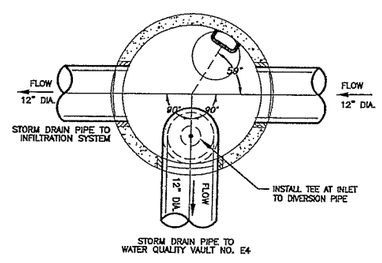
PLAN VIEW



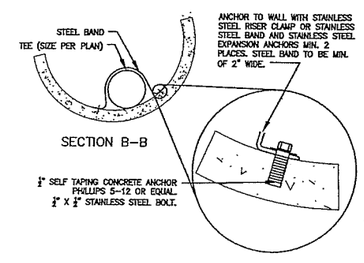
SDMH E3 - CATCH BASIN, TYPE 2 W/ FLOW SPLITTER

NOT TO SCALE

SEE DWG PP11 FOR PLAN VIEW



PLAN VIEW



FLOW CONTROL ORIFICE SECTION B-B

NOT TO SCALE

DESIGNED:	SC
DRAWN:	KW
CRP:	330422
HORIZ.	1" = 20'
VERT.	NA
DATE:	3/11/2005
DWG:	SWF7

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22440
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otak
Incorporated
700 Washington St. Suite 401
Vancouver, WA 98660
Phone: (360) 695-4476

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FLOW SPLITTER MANHOLE DETAILS

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PLAN: JMAN 03/10/2005 8:16am --> R:\DWG\C944S024A.DWG

XREF LIST
Ltscale: 20
Resolved
C944x001_border
C944x500
C944x510
PKW WASH
S944b104
S944b106
S944B200

SCALE IN FEET
20 0 20 40

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
3. CONSTRUCT TYPE 3 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F16
4. CONSTRUCT TYPE 3 COMMERCIAL CONCRETE APPROACH W/ #4 REBAR AT 6" O.C. IN PLACE OF WIRE MESH. PER CLARK COUNTY STD. PLAN NO. F16.
5. CONSTRUCT WIDENED SIDEWALK FOR MAILBOX PLACEMENT PER CLARK COUNTY STD. PLAN NO. F13.
6. CONSTRUCT 34' MAJOR COMMERCIAL DRIVEWAY APPROACH W/ #4 REBAR AT 6" O.C. IN PLACE OF WIRE MESH. PER CLARK COUNTY STD. PLAN NO. F17.

CURB INLET INFORMATION

CB1 DITCH INLET
ST. STA. 32+39.74, 46.83' RT
RIM ELEV. = 266.0±
(FIELD VERIFY)
I.E. (OUT) = 262.55
19 LF 12" STM. PIPE
S=0.0516 FT/FT

CB2a TYPE 1 CATCH BASIN
ST. STA. 32+94.14, 33.00' RT
T.C. ELEV. = 267.27
I.E. (IN) = 264.42 (10" W,E)
I.E. (OUT) = 264.42 (10" N)
34 LF 10" DIP
S=0.0118 FT/FT

CB2b CURB INLET
ST. STA. 32+84.23, 33.00' RT
T.C. ELEV. = 267.27
I.E. (OUT) = 264.52
8 LF 10" STM. PIPE
S=0.0125 FT/FT

CB2c CURB INLET
ST. STA. 33+04.23, 33.00' RT
T.C. ELEV. = 267.27
I.E. (OUT) = 264.52
8 LF 10" STM. PIPE
S=0.0125 FT/FT

CB3a COMBINATION CURB INLET
ST. STA. 32+94.14, 33.00' LT
T.C. ELEV. = 267.27
I.E. (IN) = 264.42 (10" W,E)
I.E. (OUT) = 264.42
28 LF 10" DIP
S=0.0143 FT/FT

CB3b CURB INLET
ST. STA. 32+84.18, 33.00' LT
T.C. ELEV. = 267.27
I.E. (OUT) = 264.49
7 LF 10" STM. PIPE
S=0.0100 FT/FT

CB3c CURB INLET
ST. STA. 33+04.17, 33.00' LT
T.C. ELEV. = 267.27
I.E. (IN) = 264.49
I.E. (OUT) = 264.49
7 LF 10" STM. PIPE
S=0.0100 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

DESIGNED: SLW
DRAWN: JRM
CRP: 330422
HORIZ. 1" = 20'
VERT. 1" = 5'
DATE: 3/11/2005
DWG PP01

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Vancouver, WA 98660
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PLAN AND PROFILE – NE 63RD STREET
STA. 28+00 TO STA. 33+00

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CLARK COUNTY WASHINGTON

V: SHERYL 08/24/04 6:53pm ---> V:\PROJECT\11900\11944\DWG\C944S026.DWG

XREF LIST
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Resolved
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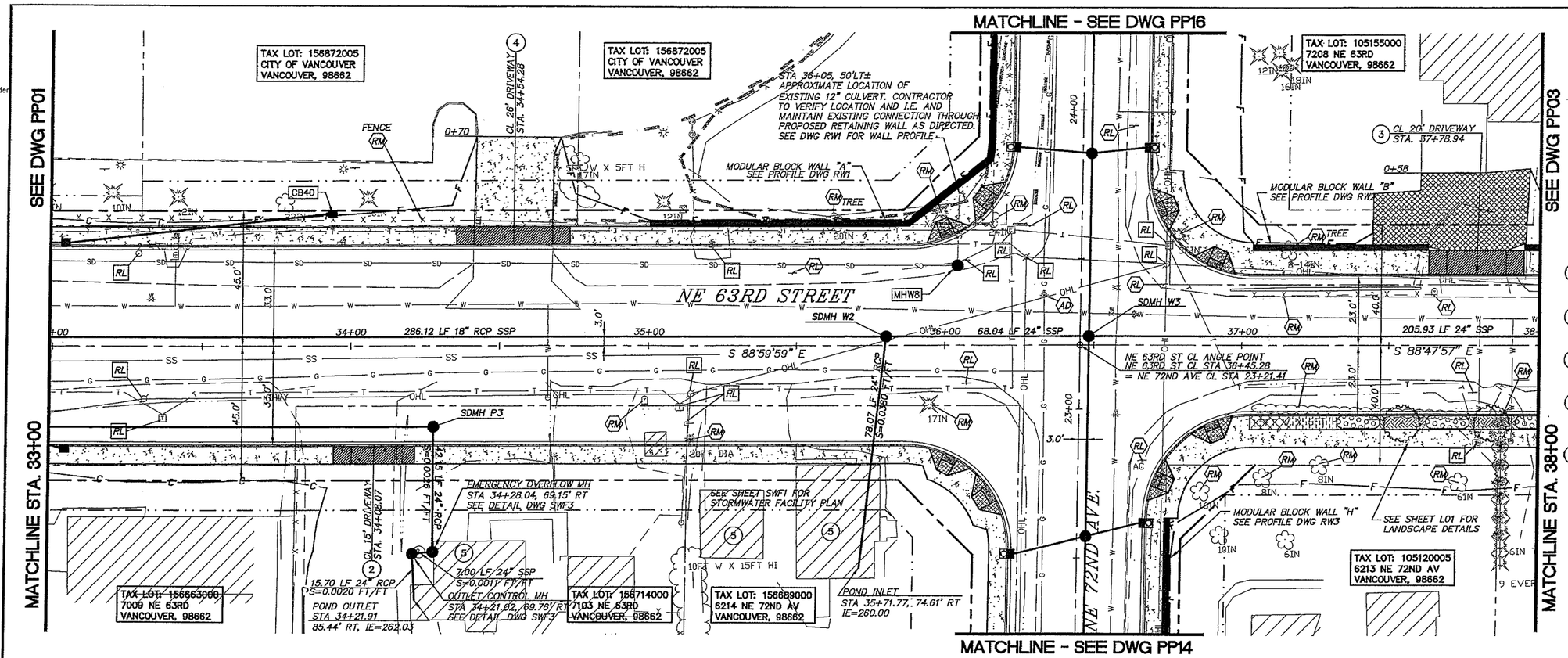
C944x500
C944x510
PKW WASH
S944b104
S944b106
S944B200



CONSTRUCTION NOTES

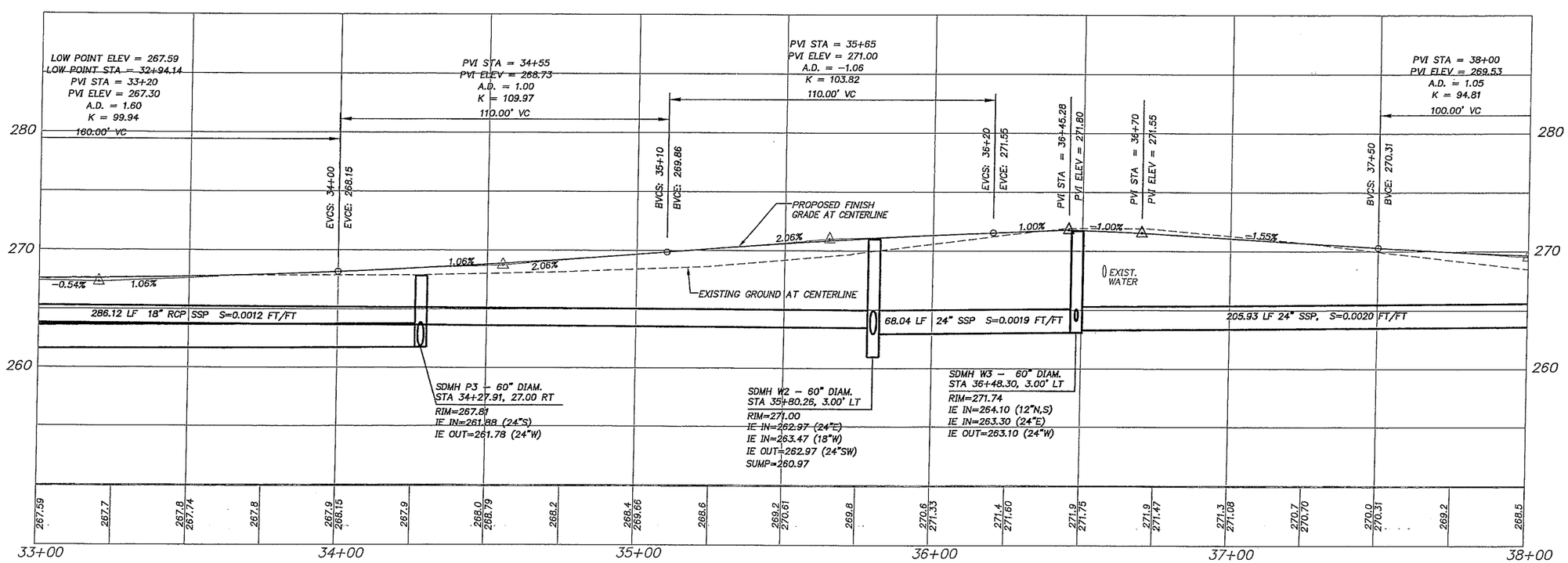
1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
3. CONSTRUCT TYPE 3 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F16
4. CONSTRUCT TYPE 3 COMMERCIAL CONCRETE APPROACH W/ #4 REBAR @ 6" O.C. IN PLACE OF WIRE MESH. PER CLARK COUNTY STD. PLAN NO. F16.
5. DEMOLISH AND REMOVE HOUSES AND OUT BUILDINGS. DECOMMISSION UTILITIES AS DIRECTED.

CURB INLET INFORMATION

SEE SHEETS PP01 AND PP15 FOR CURB INLET INFORMATION

CB40 DITCH INLET
ST. STA. 33+93.66, 43.88' LT
RIM ELEV. = 267.2±
(FIELD VERIFY)
I.E. (OUT) = 264.93
87 LF 10" STM. PIPE
S=0.0050 FT/FT

MHW8 STORM SEWER MANHOLE
ST. STA. 36+04.0±, 26.4' LT±
RIM ELEV. = 270.7±
CONNECT TO EXISTING 12" PIPES, NORTH AND WEST.
FIELD VERIFY LOCATION AS NOTED ON PLANS.



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: CONTRACTOR / CITY/COUNTY FORCES / OTHERS

NOT FOR CONSTRUCTION

DESIGNED: SLW
DRAWN: JRM
CRP: 330422
HORIZ. 1" = 20'
VERT. 1" = 5'
DATE: 3/11/2005

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PAMELA A. WILDEMANN STATE OF WASHINGTON 22440 REGISTERED PROFESSIONAL ENGINEER

otak Incorporated 700 Washington St., Suite 401 Vancouver, WA 98660 Phone: (360) 694-2691

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

PLAN AND PROFILE - NE 63RD STREET
STA 33+00 TO STA 38+00

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CLARK COUNTY WASHINGTON

SHERYL 08/24/04 6:54pm --> V:\PROJECT\11900\11944\DWG\C944S027.DWG

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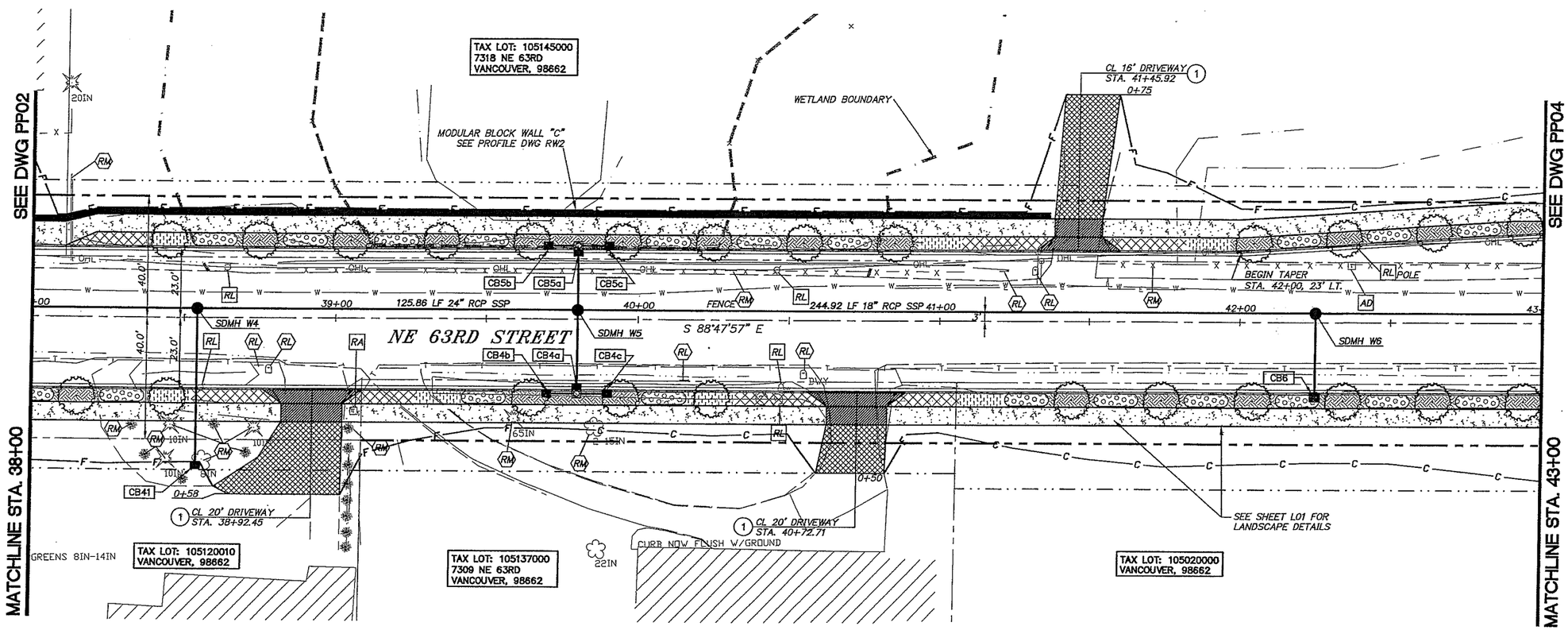
PKW WASH
S944b104
S944b106
S944B200



SCALE IN FEET
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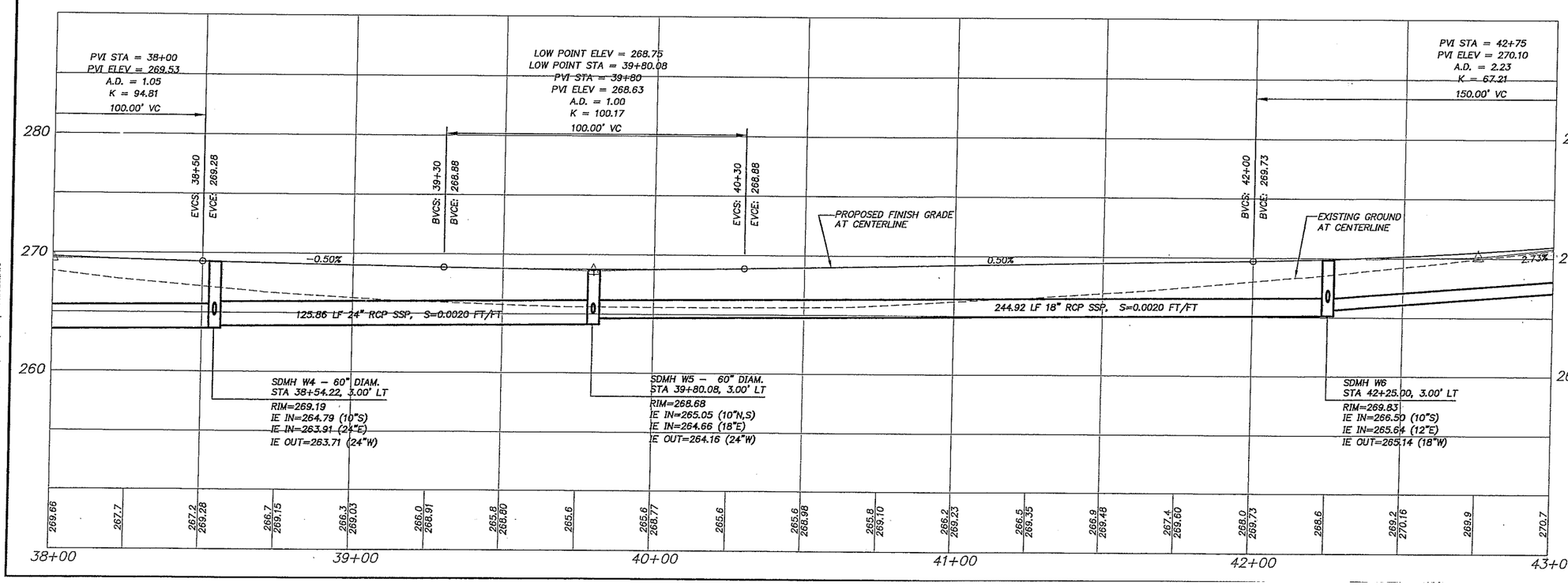

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14

CURB INLET INFORMATION

CB4a COMBINATION CURB INLET
ST. STA. 39+80.08, 23.00' RT
T.C. ELEV. = 268.68
I.E. (IN) = 265.18
I.E. (OUT) = 265.18
24 LF 10" DIP
S=0.0054 FT/FT

CB4b CURB INLET
ST. STA. 39+70.06, 23.00' RT
T.C. ELEV. = 268.69
I.E. (OUT) = 265.28
7 LF 10" STM. PIPE
S=0.0143 FT/FT

CB4c CURB INLET
ST. STA. 39+90.17, 23.00' RT
T.C. ELEV. = 268.69
I.E. (OUT) = 265.28
7 LF 10" STM. PIPE
S=0.0143 FT/FT

CB5a COMBINATION CURB INLET
ST. STA. 39+80.08, 23.00' LT
T.C. ELEV. = 268.68
I.E. (IN) = 265.18
I.E. (OUT) = 265.18
18 LF 10" DIP
S=0.0072 FT/FT

CB5b CURB INLET
ST. STA. 39+70.10, 23.00' LT
T.C. ELEV. = 268.69
I.E. (OUT) = 265.28
7 LF 10" DIP
S=0.0143 FT/FT

CB5c CURB INLET
ST. STA. 39+90.23, 23.00' LT
T.C. ELEV. = 268.69
I.E. (OUT) = 265.28
7 LF 10" STM. PIPE
S=0.0143 FT/FT

CB6 CURB INLET
ST. STA. 42+25, 23.00' RT
T.C. ELEV. = 269.83
I.E. (OUT) = 266.63
26 LF 10" DIP
S=0.0050 FT/FT

CB41 DITCH INLET
ST. STA. 38+54.22, 48.50' RT
RIM ELEV. = 266.3±
(FIELD VERIFY)
I.E. (OUT) = 265.02
51 LF 10" STM. PIPE
S=0.0045 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP03

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700 Washington St., Suite 401
Vancouver, WA 98660
Phone: (360) 737-9918

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
PLAN AND PROFILE - NE 63RD STREET
STA. 38+00 TO STA. 43+00

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CLARK COUNTY WASHINGTON

V: SHERYL 08/24/04 6:55pm --> V:\PROJECT\11900\11944\DWG\C944S028.DWG

XRSF LIST
Ltscale: 20
Resolved
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C944x500
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PKW WASH
S944b104
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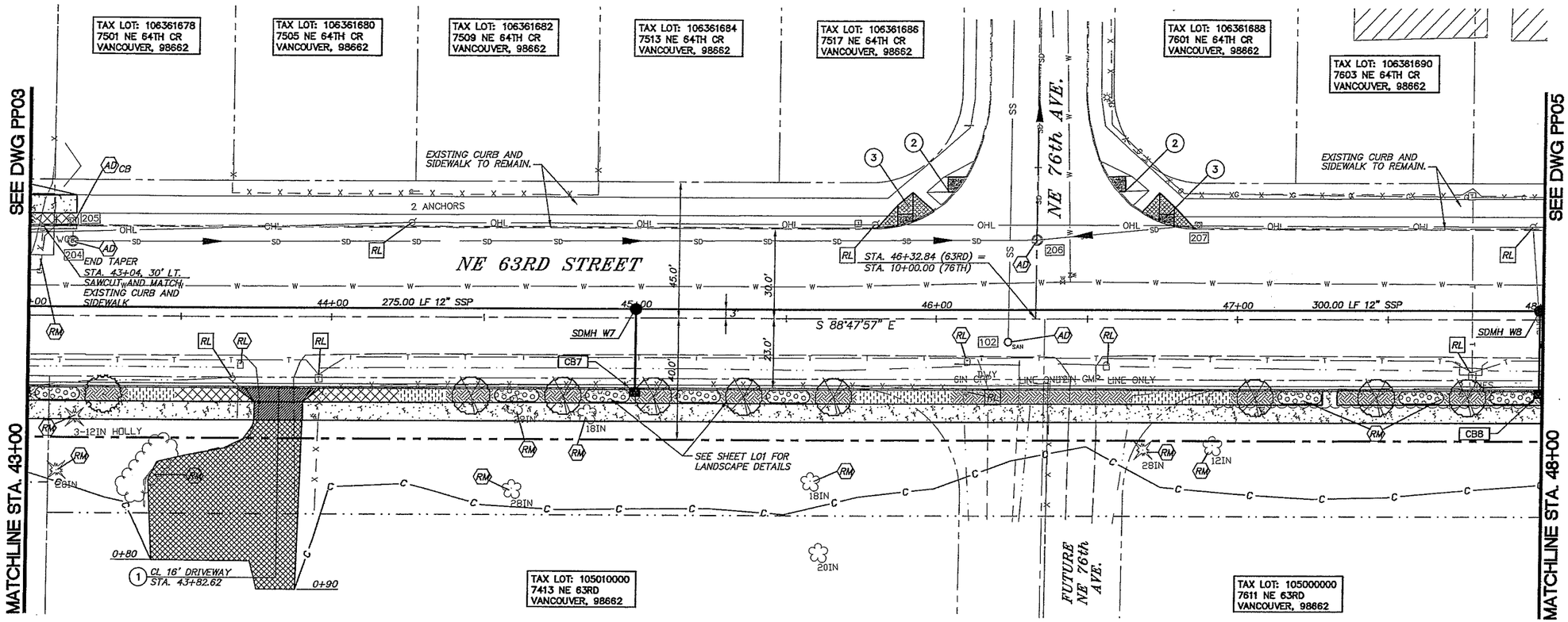
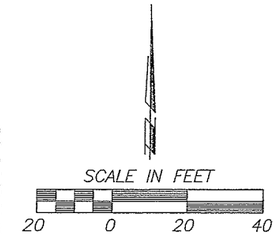
S944B200





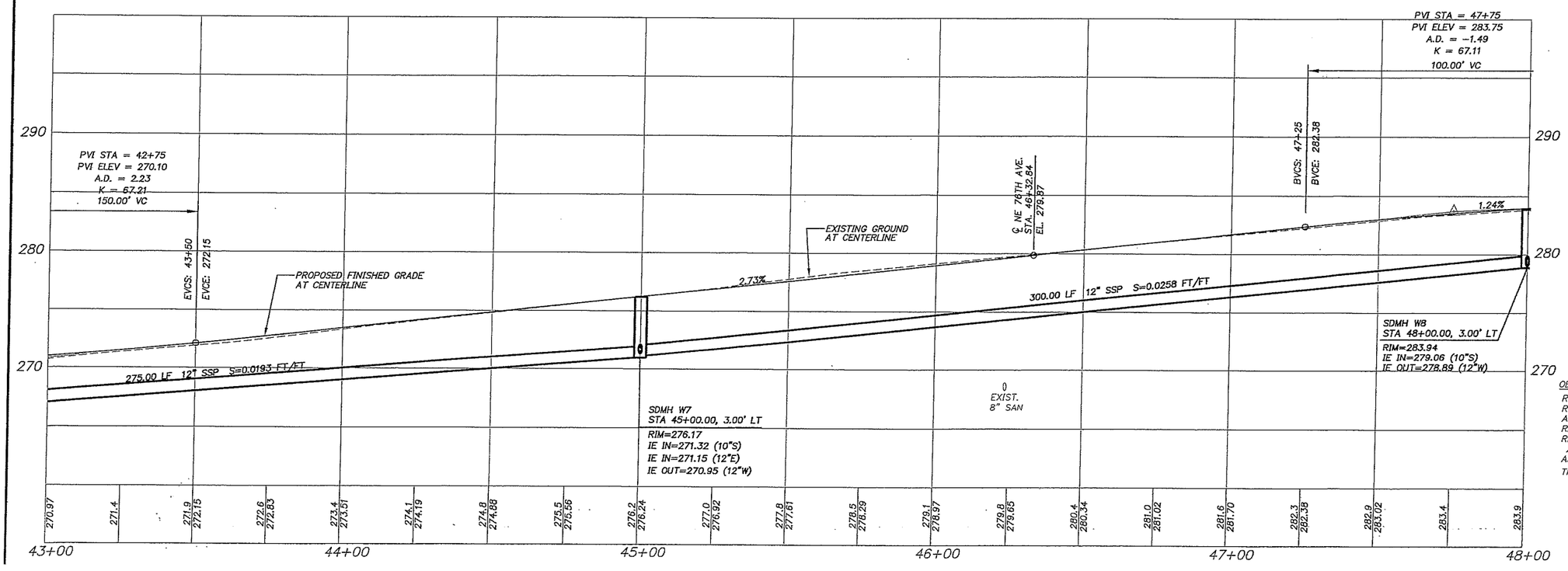
CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. INSTALL DETECTABLE WARNING PATTERN IN EXISTING RAMPS PER DETAILS ON SHEET D01
3. CONSTRUCT NEW TYPE A-1 CURB AND GUTTER, AND NEW SIDEWALK RAMP PER DETAILS F18 AND F1.

CURB INLET INFORMATION

CB7 CURB INLET
ST. STA. 45+00.00, 23.00' RT
T.C. ELEV. = 276.17
I.E. (OUT) = 271.67
26 LF 10" STM. PIPE
S=0.0135 FT/FT

CB8 CURB INLET
ST. STA. 48+00.00, 23.00' RT
T.C. ELEV. = 283.94
I.E. (OUT) = 279.44
26 LF 10" STM. PIPE
S=0.0146 FT/FT



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ◯ CITY/COUNTY FORCES ☐ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP04

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PAUL E. WIEDEMANN
STATE OF WASHINGTON
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otak
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CLARK COUNTY
WASHINGTON

SHEET: 08/24/04 8:56pm ---> V:\PROJECT\11900\11944\DWG\C944S029.DWG

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S944b106
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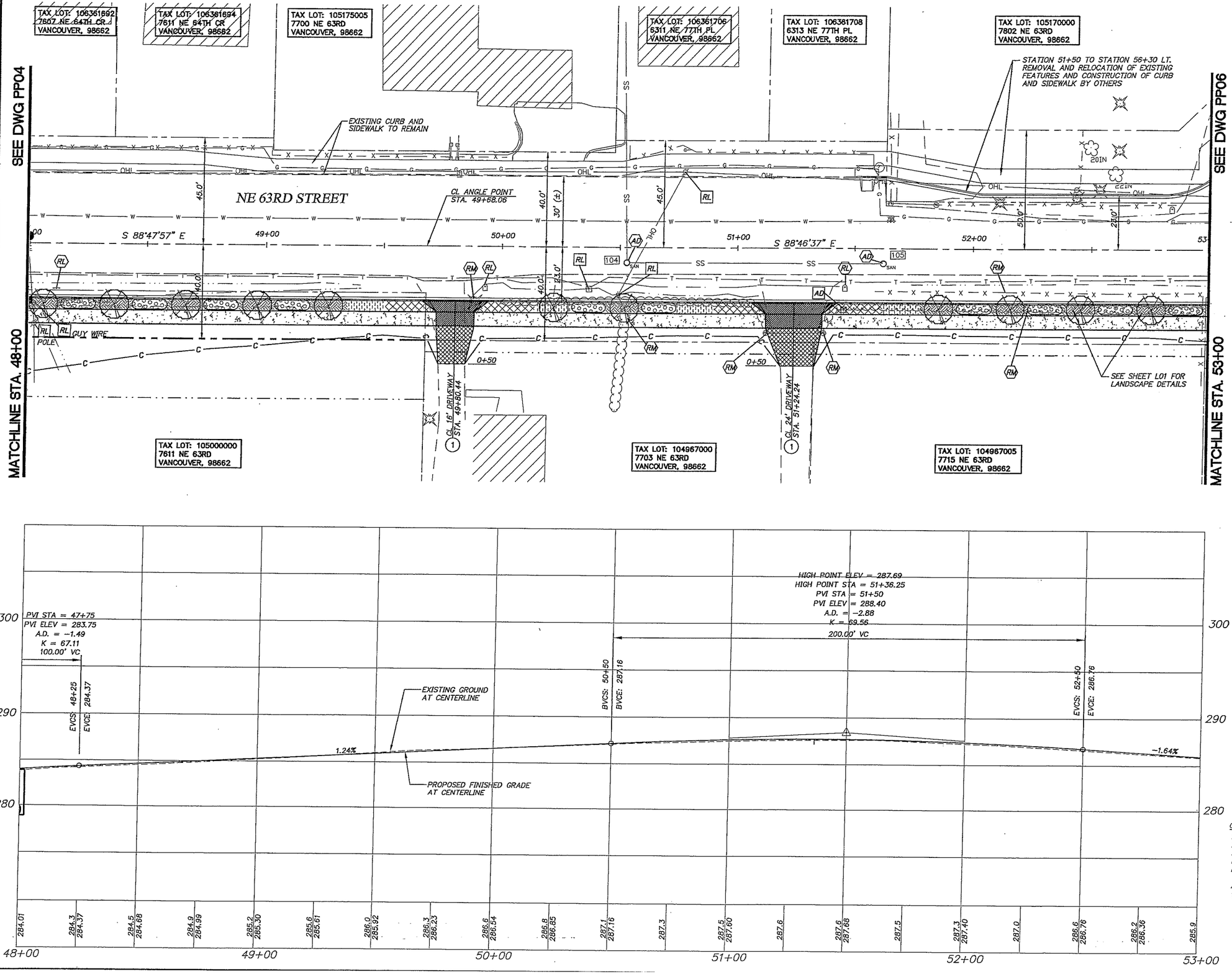

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP05

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PAMELA J. LEDEMANN STATE OF WASHINGTON 22440 REGISTERED PROFESSIONAL ENGINEER

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Phone: (360) 737-8610

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PLAN AND PROFILE – NE 63RD STREET
STA. 48+00 TO STA. 53+00

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V: GRANTE 01/26/04 4:59pm ---> R:\DWG\C944S023.DWG

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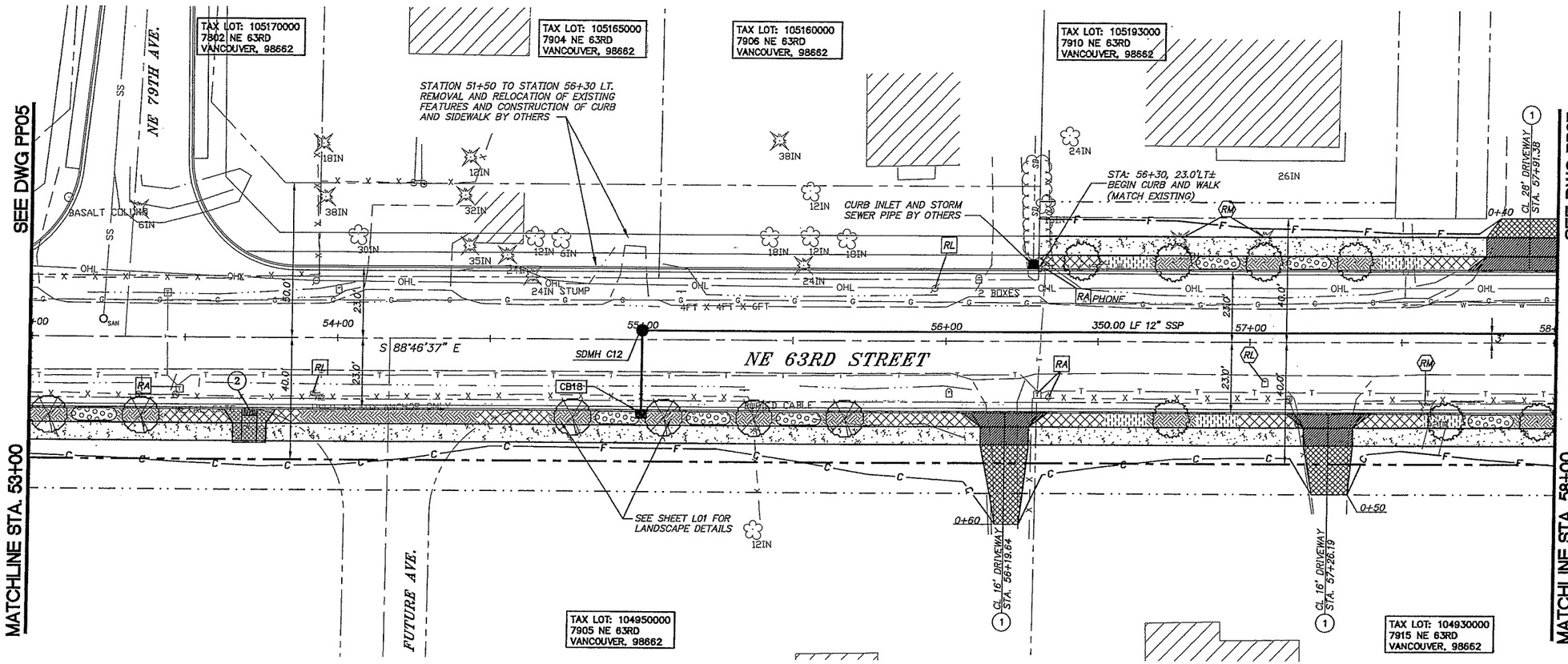

SCALE IN FEET
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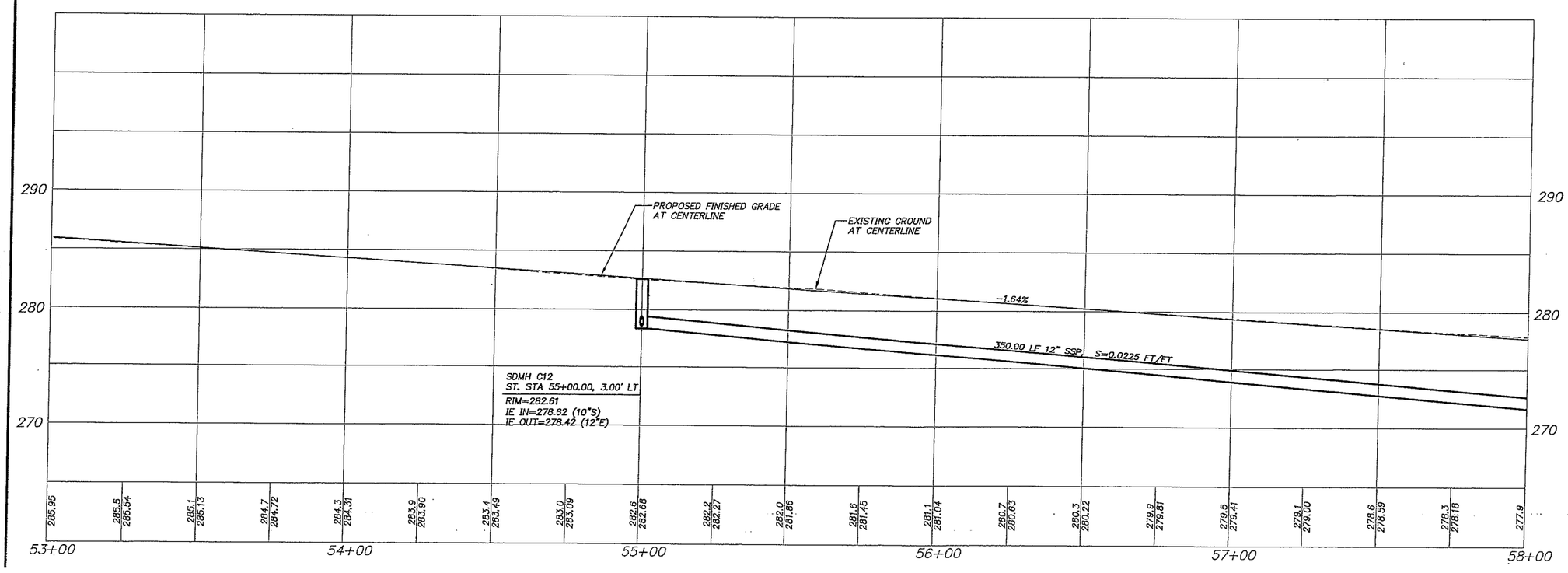
CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. STA 53+71.5, CONSTRUCT TYPE 4 SIDEWALK RAMP PER CLARK COUNTY STD. PLAN NO. F4

CURB INLET INFORMATION

CB18 CURB INLET
ST. STA. 55+00.00, 23.00' RT
T.C. ELEV. = 282.61
I.E. (OUT) = 278.88
26 LF 10" STM. PIPE
S=0.0100 FT/FT



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

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DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP06

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PLAN AND PROFILE – NE 63RD STREET
STA. 53+00 TO STA. 58+00

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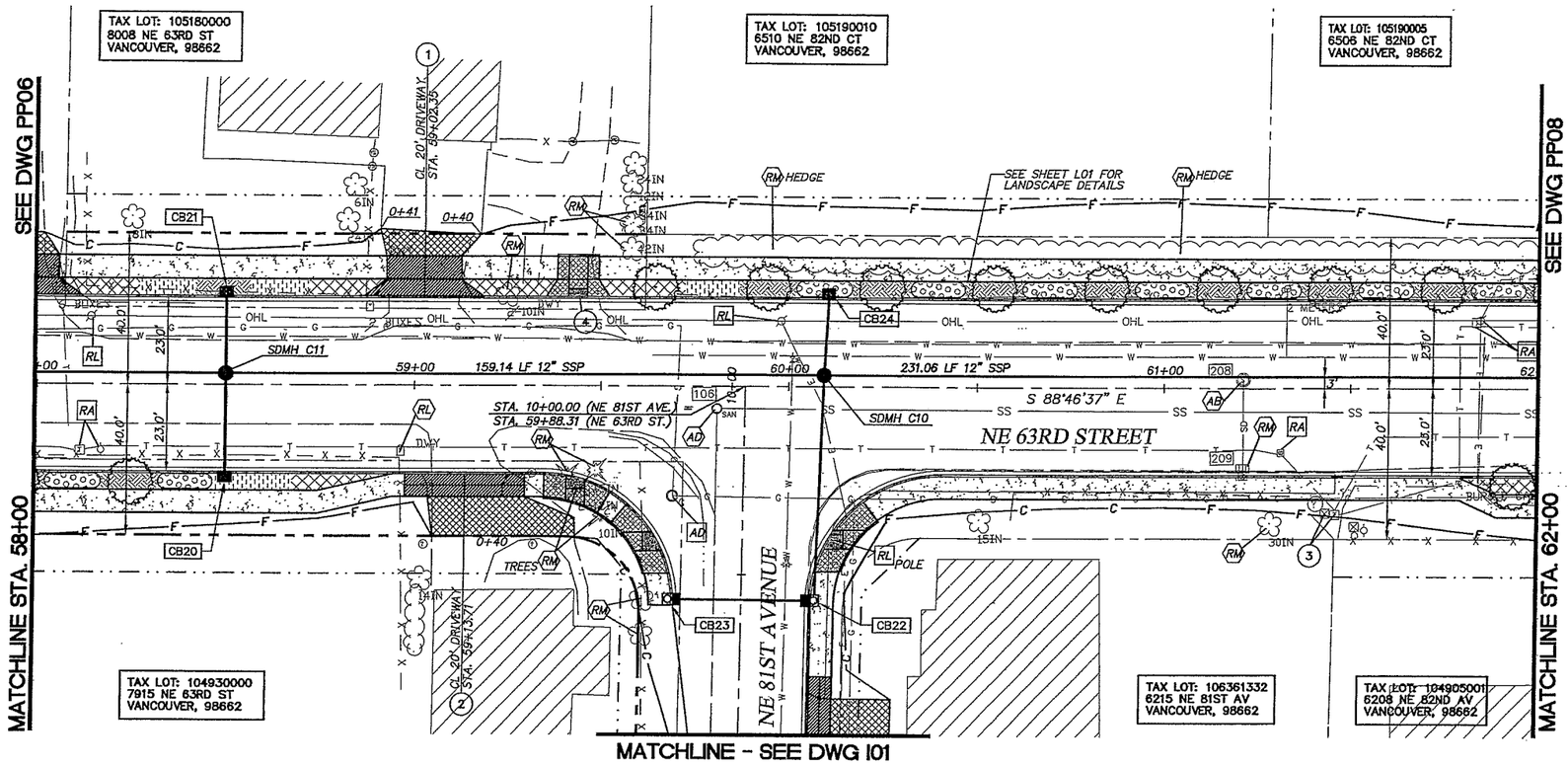

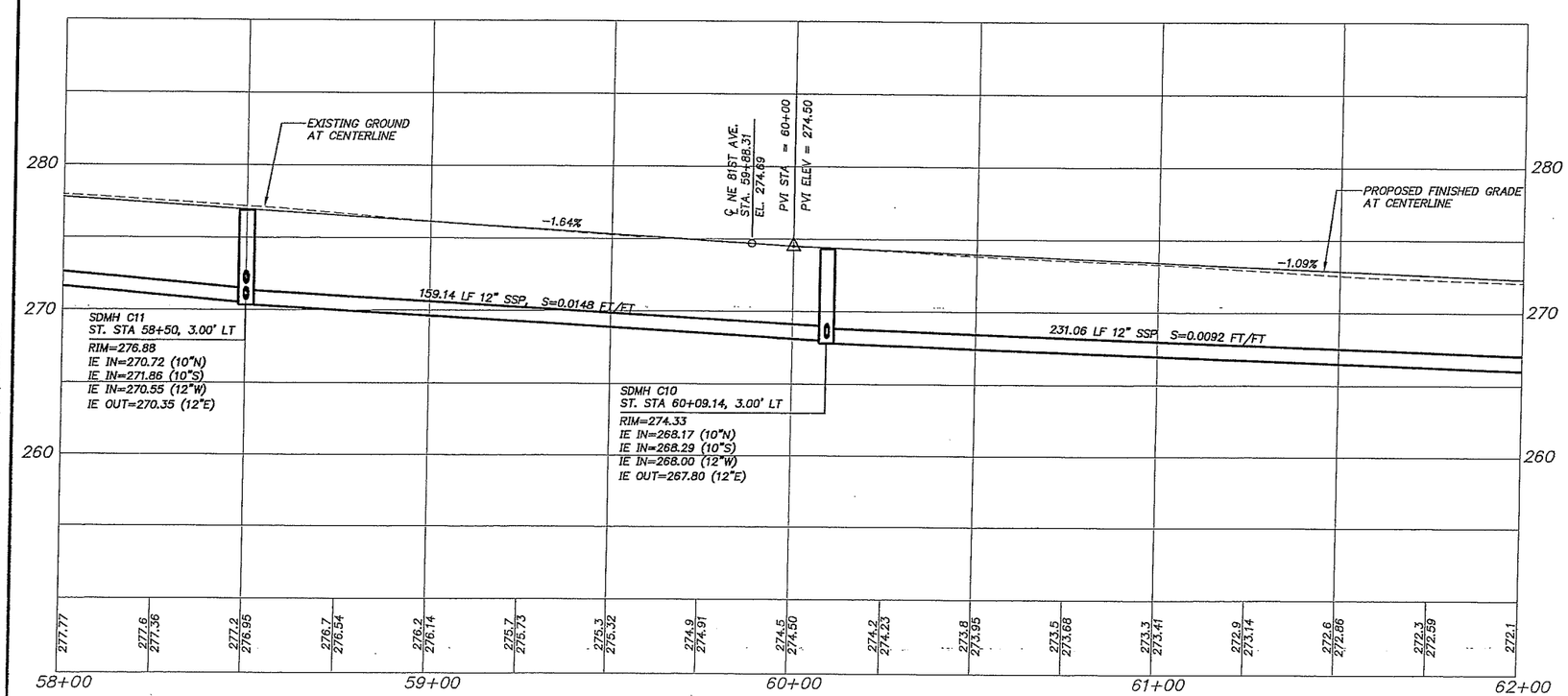

SCALE IN FEET
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CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
3. PROTECT EXISTING UTILITY VAULTS.
4. STA 59+44.2, CONSTRUCT TYPE 4 SIDEWALK RAMP PER CLARK COUNTY STD. PLAN NO. F4

CURB INLET INFORMATION

CB20 CURB INLET
ST. STA. 58+50.00, 23.00' RT
T.C. ELEV. = 276.88
I.E. (OUT) = 272.38
26 LF 10" STM. PIPE
S=0.0200 FT/FT

CB21 CURB INLET
ST. STA. 58+50.00, 23.00' LT
T.C. ELEV. = 276.88
I.E. (OUT) = 271.38
20 LF 10" STM. PIPE
S=0.0330 FT/FT

CB22 COMBINATION CURB INLET
ST. STA. 9+43.31, 18.00' RT
T.C. ELEV. = 274.33
I.E. (IN) = 269.33
I.E. (OUT) = 269.33
59 LF 10" STM. PIPE
S=0.0176 FT/FT

CB23 COMBINATION CURB INLET
ST. STA. 9+43.31, 18.00' LT
T.C. ELEV. = 274.35
I.E. (OUT) = 270.05
36 LF 10" STM. PIPE
S=0.0200 FT/FT

CB24 CURB INLET
ST. STA. 60+10.19, 23.00' LT
T.C. ELEV. = 274.32
I.E. (OUT) = 268.82
20 LF 10" STM. PIPE
S=0.0325 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ◯ CITY/COUNTY FORCES ▢ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP07

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PLAN AND PROFILE - NE 63RD STREET
STA. 58+00 TO STA 62+00

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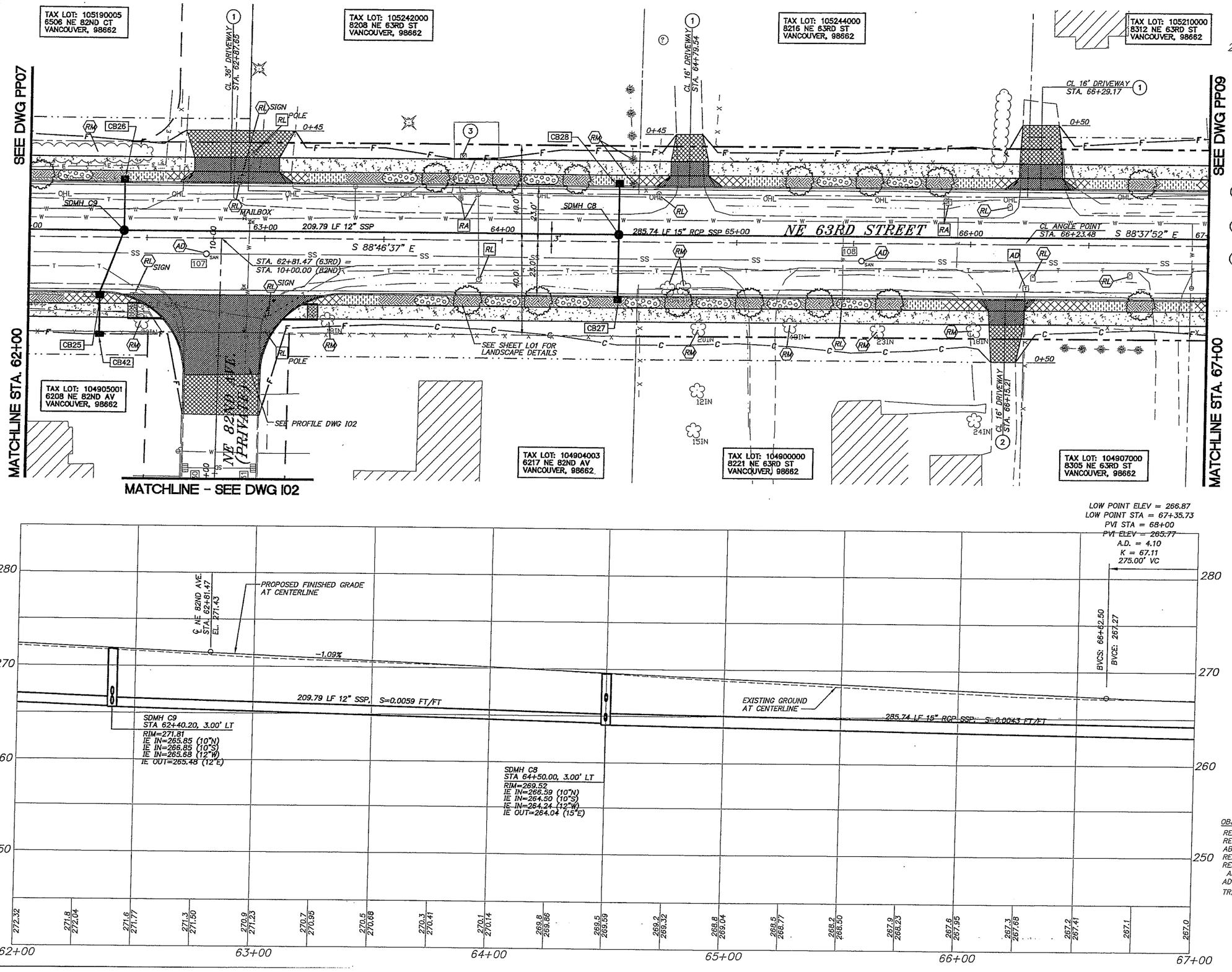

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
3. PROTECT EXISTING UTILITY VAULTS.

CURB INLET INFORMATION

CB25 CURB INLET
ST. STA. 62+30.18, 23.00' RT.
T.C. ELEV. = 271.92
I.E. (IN) = 267.42
I.E. (OUT) = 267.42
28 LF 10" STM. PIPE
S=0.0204 FT/FT

CB26 CURB INLET
ST. STA. 62+40.19, 23.00' LT.
T.C. ELEV. = 271.81
I.E. (OUT) = 266.31
20 LF 10" STM. PIPE
S=0.0230 FT/FT

CB27 CURB INLET
ST. STA. 64+50.00, 23.00' RT.
T.C. ELEV. = 269.52
I.E. (OUT) = 265.02
26 LF 10" STM. PIPE
S=0.0200 FT/FT

CB28 CURB INLET
ST. STA. 64+50.00, 23.00' LT.
T.C. ELEV. = 269.52
I.E. (OUT) = 266.69
20 LF 10" DIP
S=0.0050 FT/FT

CB42 DITCH INLET
ST. STA. 62+30.18, 41.12' RT.
RIM ELEV. = 270.5±
(FIELD VERIFY)
I.E. (OUT) = 267.75
14 LF 10" STM. PIPE
S=0.0236 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005

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STA. 62+00 TO STA. 67+00

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V: JOHNMA 11/11/03 2:21pm ---> R:\DWG\C944S026.DWG

XREF LIST
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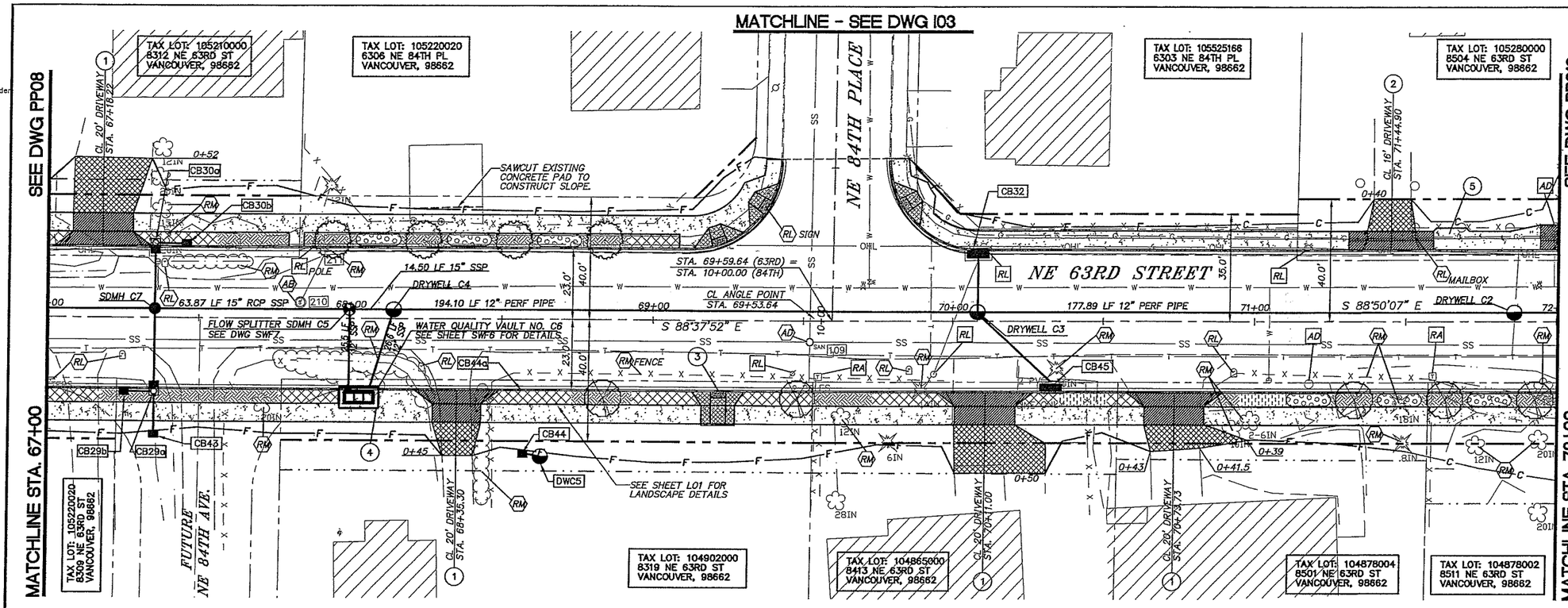

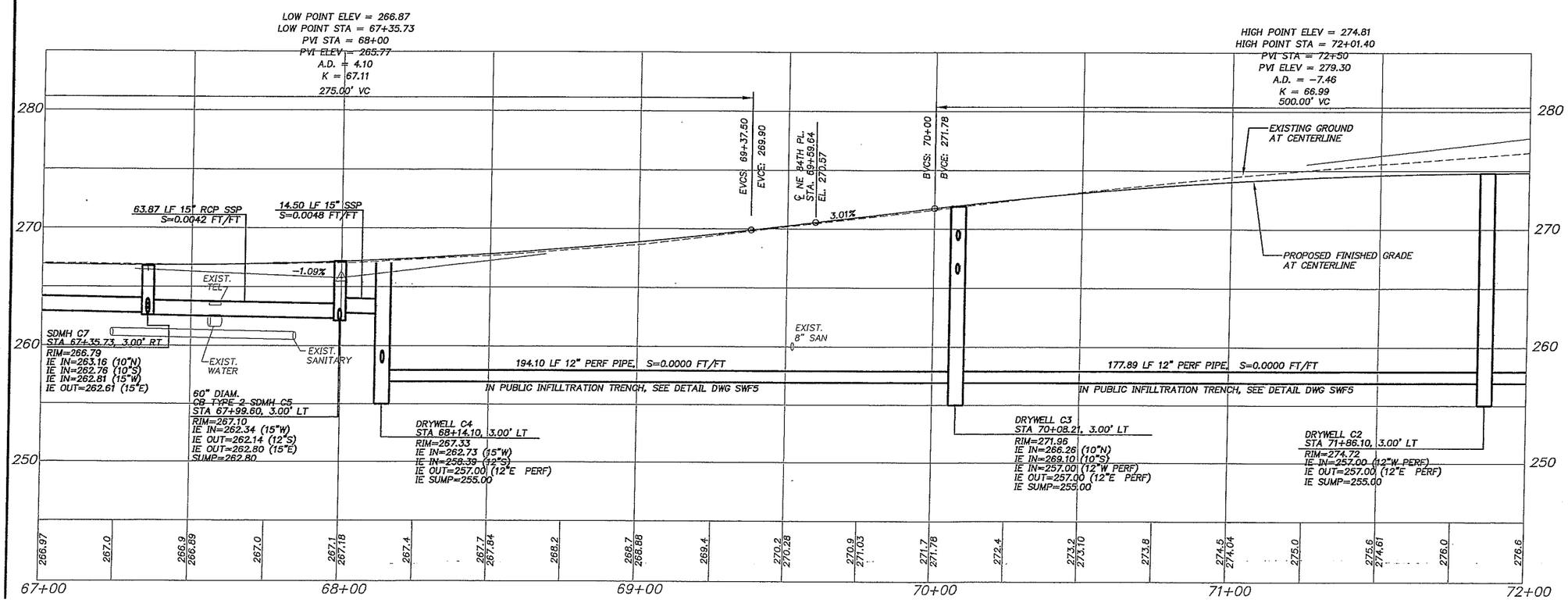

SCALE IN FEET
20 0 20 40

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
3. STA 69+21.6, CONSTRUCT TYPE 4 SIDEWALK RAMP PER CLARK COUNTY STD. PLAN NO. F4
4. CONSTRUCT 11' X 30' THICKEN SIDEWALK PAD OVER STORMWATER VAULT, PER DETAIL ON DWG D01.
5. CONSTRUCT WIDENED SIDEWALK FOR MAILBOX PLACEMENT PER CLARK COUNTY STD. PLAN NO. F13.

CURB INLET INFORMATION

CB29a COMBINATION CURB INLET
ST. STA. 67+35.73, 23.00' RT.
T.C. ELEV. = 266.80
I.E. (IN) = 262.87 (10" S,E)
I.E. (OUT) = 262.87
24 LF 10" STM. PIPE
S=0.0046 FT/FT

CB29b CURB INLET
ST. STA. 67+25.80, 23.00' RT.
T.C. ELEV. = 266.81
I.E. (OUT) = 262.91
7 LF 10" STM. PIPE
S=0.0057 FT/FT

CB30a COMBINATION CURB INLET
ST. STA. 67+35.75, 23.00' LT.
T.C. ELEV. = 266.80
I.E. (IN) = 263.30
I.E. (OUT) = 263.30
18 LF 10" STM. PIPE
S=0.0078 FT/FT

CB30b CURB INLET
ST. STA. 67+45.82, 23.00' LT.
T.C. ELEV. = 266.81
I.E. (OUT) = 263.34
7 LF 10" STM. PIPE
S=0.0057 FT/FT

CB32 2 CARTRIDGE STORMFILTER CATCH BASIN SEE SHEET SWF5
ST. STA. 70+08.23, 23.01' LT.
CURB LOCATION
T.C. ELEV. = 271.95
I.E. (OUT) = 269.16
20 LF 10" STM. PIPE
S=0.1450 FT/FT

CB43 DITCH INLET
ST. STA. 67+35.77, 38.30' RT.
RIM ELEV. = 265.8±
(FIELD VERIFY)
I.E. (OUT) = 263.15
12 LF 10" STM. PIPE
S=0.0233 FT/FT

CB44 DITCH INLET
ST. STA. 68+58.9, 44.3' RT±
RIM ELEV. = 265.9±
(FIELD VERIFY)
I.E. (OUT) = 263.30
4 LF 10" STM. PIPE
S=0.0200 FT/FT

CB45 2 CARTRIDGE STORMFILTER CATCH BASIN SEE SHEET SWF5
ST. STA. 70+32.82, 23.00' LT.
CURB LOCATION
T.C. ELEV. = 272.62
I.E. (OUT) = 269.82
33 LF 10" STM. PIPE
S=0.0218 FT/FT

DWC5 DRYWELL
ST. STA. 68+63.22, 45.15' RT
RIM ELEV. = 265.9±
(FIELD VERIFY)
I.E. (IN) = 263.22

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ◯ CITY/COUNTY FORCES ☐ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP09

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STA. 67+00 TO STA. 72+00

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SHERYL 11/07/03 12:26pm ---> H:\PROJECT\11900\11944\DWG\C944S027.DWG

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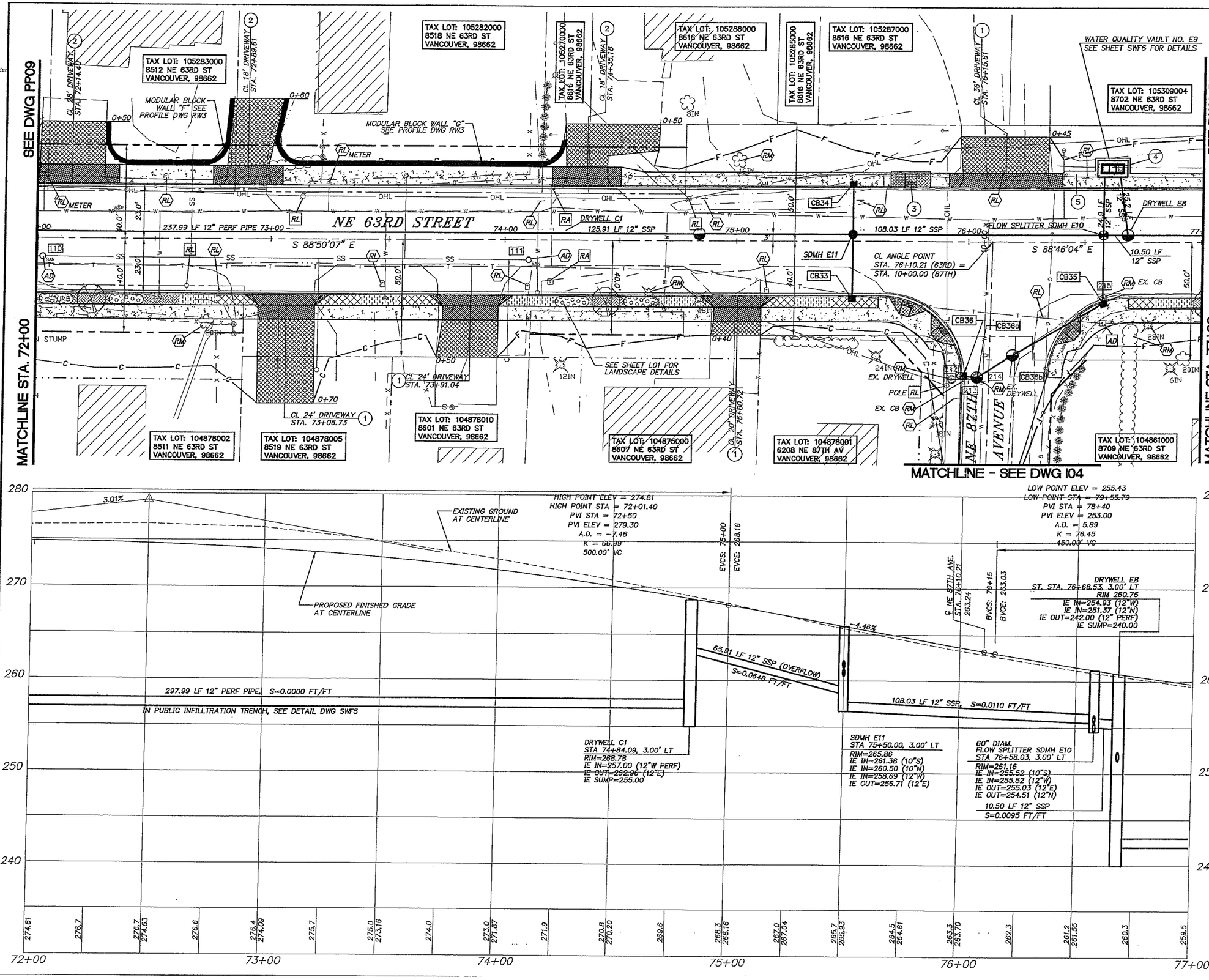

SCALE IN FEET
20 0 20 40

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
3. STA 75+74.6, CONSTRUCT TYPE 3 SIDEWALK RAMP PER CLARK COUNTY STD. PLAN NO. F3
4. CONSTRUCT 13' X 15' THICKEN SIDEWALK PAD OVER STORMWATER VAULT, PER DETAIL ON DWG D01.
5. CONSTRUCT WIDENED SIDEWALK FOR MAILBOX PLACEMENT PER CLARK COUNTY STD. PLAN NO. F13.

CURB INLET INFORMATION

CB33 CURB INLET
ST. STA.75+50.00, 23.00' RT.
T.C. ELEV. = 265.86
I.E. (OUT) = 261.86
26 LF 10" STM. PIPE
S=0.0185 FT/FT

CB34 CURB INLET
ST. STA. 75+50.00, 23.00' LT.
T.C. ELEV. = 265.86
I.E. (OUT) = 260.86
20 LF 10" STM. PIPE
S=0.0180 FT/FT

CB35 CURB INLET
ST. STA. 76+58.04, 24.84' RT.
T.C. ELEV. = 261.29
I.E. (IN) = 256.54
I.E. (OUT) = 256.04
28 LF 10" STM. PIPE
S=0.0186 FT/FT

CB36 COMBINATION CURB INLET
ST. STA. 9+42.79, 11.16' LT.
T.C. ELEV. = 262.55
I.E. (OUT) = 258.05
7 LF 10" STM. PIPE
S=0.0200 FT/FT

CB36a DRYWELL
ST. STA. 9+42.27, 5.00' LT.
RIM ELEV. = 262.12
I.E. (IN) = 257.19 (10" W)
I.E. (OUT) = 253.05 (10" NE)
I.E. (S) - FIELD VERIFY
18 LF 10" STM PIPE
S=0.0000 FT/FT
I.E. SUMP=249.65

CB36b DRYWELL
ST. STA. 9+52.15, 10.00' RT.
RIM ELEV. = 262.05
I.E. (OUT) = 256.97 (10" NE)
I.E. (IN) = 253.05 (10" SW)
43 LF 10" STM. PIPE
(EMERGENCY OVERFLOW)
S=0.0100 FT/FT
I.E. SUMP=249.65

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP10

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V: SHERYL 11/07/03 12:27pm ---> H:\PROJECT\11900\11944\DWG\C944S028.DWG

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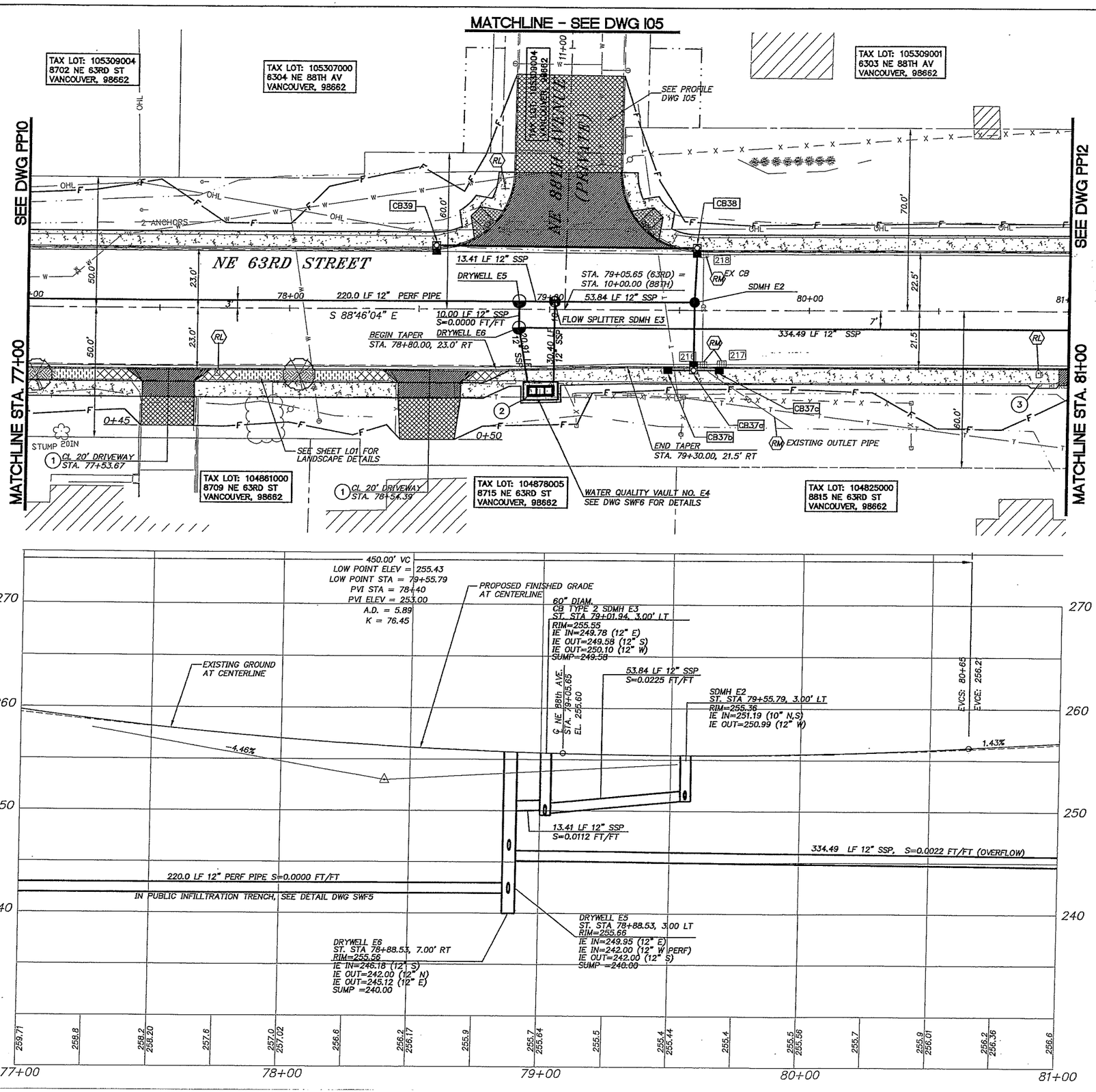

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 1 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. CONSTRUCT 13' X 15' THICKEN SIDEWALK PAD OVER STORMWATER VAULT, PER DETAIL ON DWG D01.
3. CONSTRUCT WIDENED SIDEWALK FOR MAILBOX PLACEMENT PER CLARK COUNTY STD. PLAN NO. F13.

CURB INLET INFORMATION

CB37c COMBINATION CURB INLET
ST. STA. 79+55.79, 21.50' RT.
T.C. ELEV. = 255.38
I.E. (IN) = 251.38
I.E. (OUT) = 251.38
23 LF 10" STM. PIPE
S=0.0083 FT/FT

CB37b CURB INLET
ST. STA. 79+45.84, 21.50' RT
T.C. ELEV. = 255.40
I.E. (OUT) = 251.58
7 LF 10" STM. PIPE
S=0.0286 FT/FT

CB37c CURB INLET
ST. STA. 79+65.75, 21.50' RT.
T.C. ELEV. = 255.38
I.E. (OUT) = 251.58
7 LF 10" STM. PIPE
S=0.0286 FT/FT

CB38 COMBINATION CURB INLET
ST. STA. 79+56.49, 22.50' LT.
T.C. ELEV. = 255.37
I.E. (IN) = 251.36
I.E. (OUT) = 251.36
18 LF 10" STM. PIPE
S=0.0094 FT/FT

CB39 COMBINATION CURB INLET
ST. STA. 78+56.38, 23.00' LT.
T.C. ELEV. = 256.01
I.E. (OUT) = 252.03
97 LF 10" STM. PIPE
S=0.0069 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP11

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PAUL A. WILLEMANN, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER, 22440

otak Incorporated
700 Washington St., Suite 401
Vancouver, WA. 98660
Phone: (360) 737-4813

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PLAN AND PROFILE - NE 63RD STREET
STA. 77+00 TO STA. 81+00

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V:\ SHERYL 02/23/04 1:12am <-> H:\PROJECT\11900\11944\DWG\C944S029.DWG

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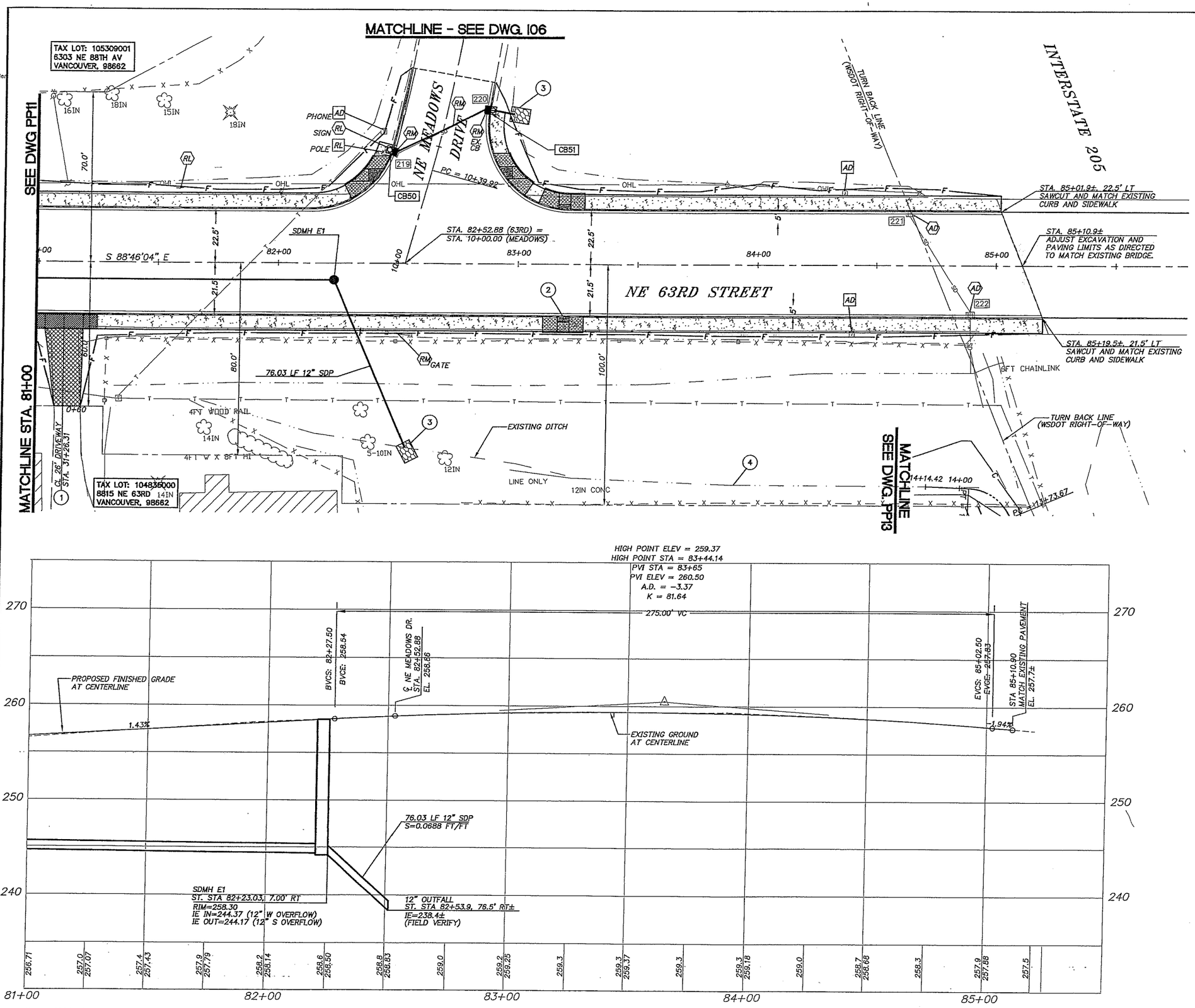

SCALE IN FEET
20 0 20 40

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 3 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F14
2. STA 83+18.8, CONSTRUCT TYPE 3 SIDEWALK RAMP PER CLARK COUNTY STD. PLAN NO. F3
3. 6' X 8' OUTFALL PROTECTION CONSTRUCT LIGHT LOOSE RIPRAP SEE DETAIL SHEET EC5
4. CONTRACTOR TO CLEAN EXISTING DITCH, AND GRADE TO DRAIN.

CURB INLET INFORMATION

CB50 COMBINATION CURB INLET
REPLACE EXISTING CATCH BASIN
ST. STA. 10+43.48, 17.73' LT.
T.C. ELEV. = 257.67
I.E. (OUT) = 253.42
41 LF 10" SSP
S=0.0200 FT/FT

CB51 COMBINATION CURB INLET
REPLACE EXISTING CATCH BASIN
ST. STA. 10+69.40, 17.00' RT
T.C. ELEV. = 256.76
I.E. (IN) = 252.60
I.E. (OUT) = 252.60 (E)
8 LF 10" SSP

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ◯ CITY/COUNTY FORCES ☐ OTHERS

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP12

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PLAN AND PROFILE - NE 63RD STREET
STA. 81+00 TO STA. 85+25

NOT FOR CONSTRUCTION

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CLARK COUNTY WASHINGTON

V: SHERYL 02/23/04 1:09am ---> H:\PROJECT\11900\11944\DWG\C944S030.DWG

XREF LIST
Ltscale: 20
Resolved
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C944x500
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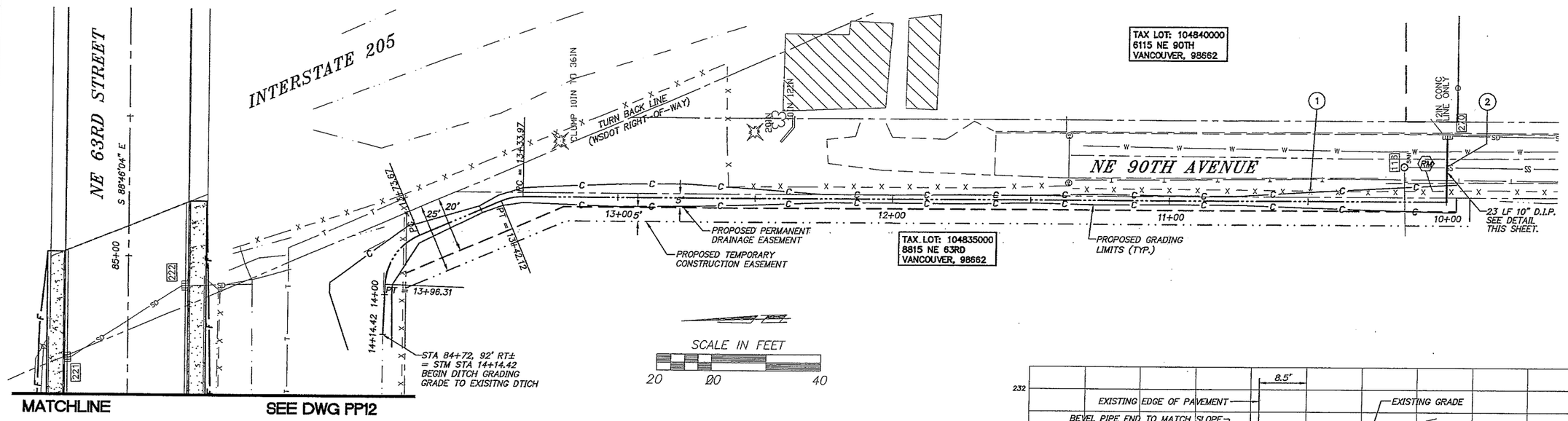
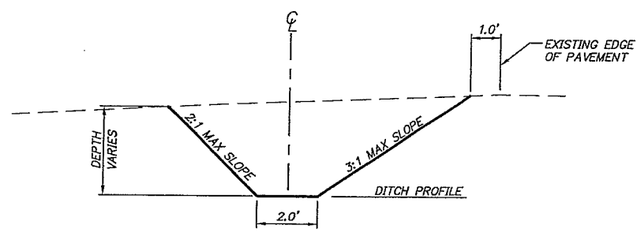
ParcelNames
PKW WASH
S944b104
S944b106
S944B200



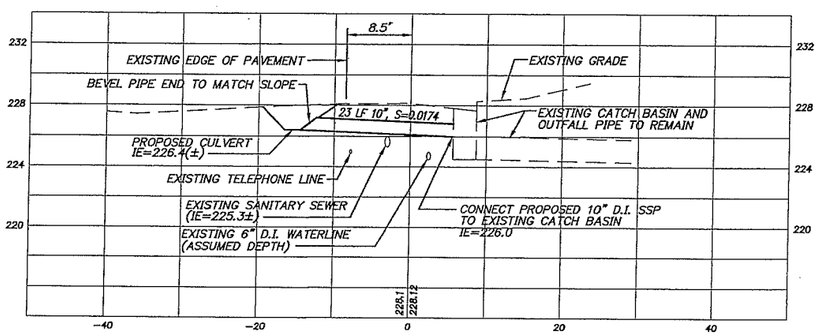
SCALE IN FEET
20 0 20 40

CONSTRUCTION NOTES

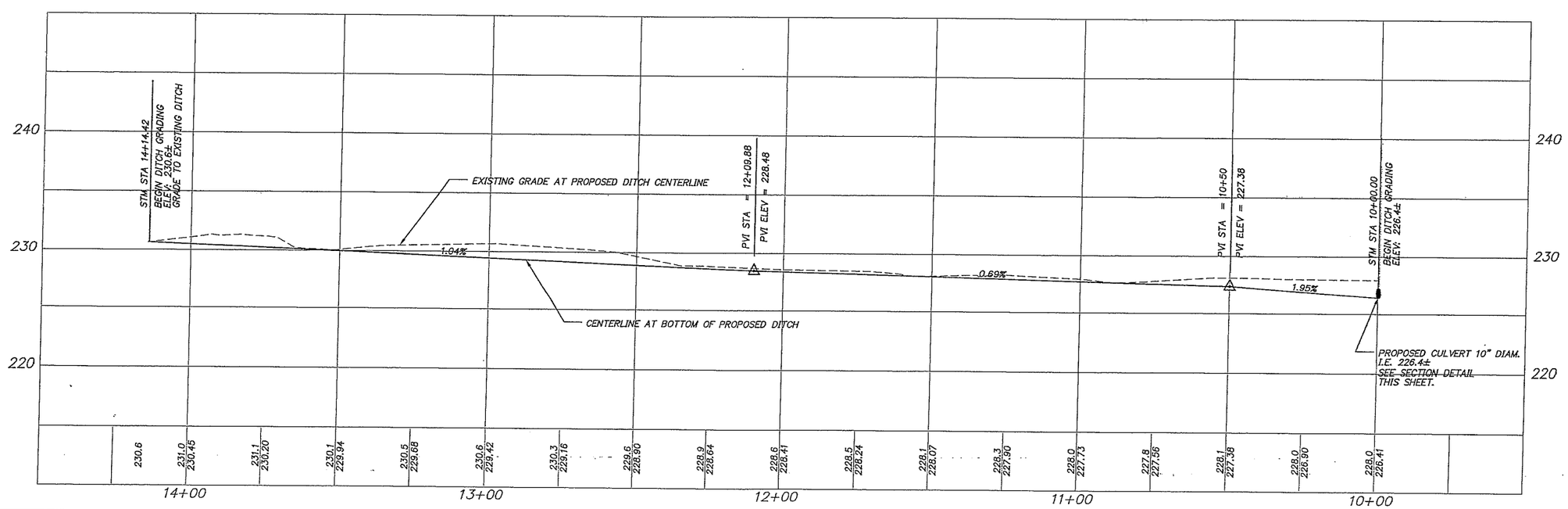
1. REMOVE AND REPLACE EXISTING FENCE AS NECESSARY TO CONSTRUCT DITCH
2. CONTRACTOR TO CONFIRM SANITARY SEWER DEPTH AND LOWER PROPOSED 10" CULVERT AS DIRECTED.



DITCH SECTION
SCALE: 1"=5'



CULVERT CROSSING
SCALE: 1"=10' (HORIZ.), 1"=5' (VERT.)



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: CONTRACTOR / CITY/COUNTY FORCES / OTHERS

V: SHERYL 02/23/04 1:09am ---> H:\PROJECT\11900\11944\DWG\C944S030.DWG

DESIGNED:	SLW
DRAWN:	VRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP13

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PLAN AND PROFILE - NE 63RD STREET
DITCH TO NE 90TH AVENUE

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XREF LIST
Ltscale: 20
Resolved
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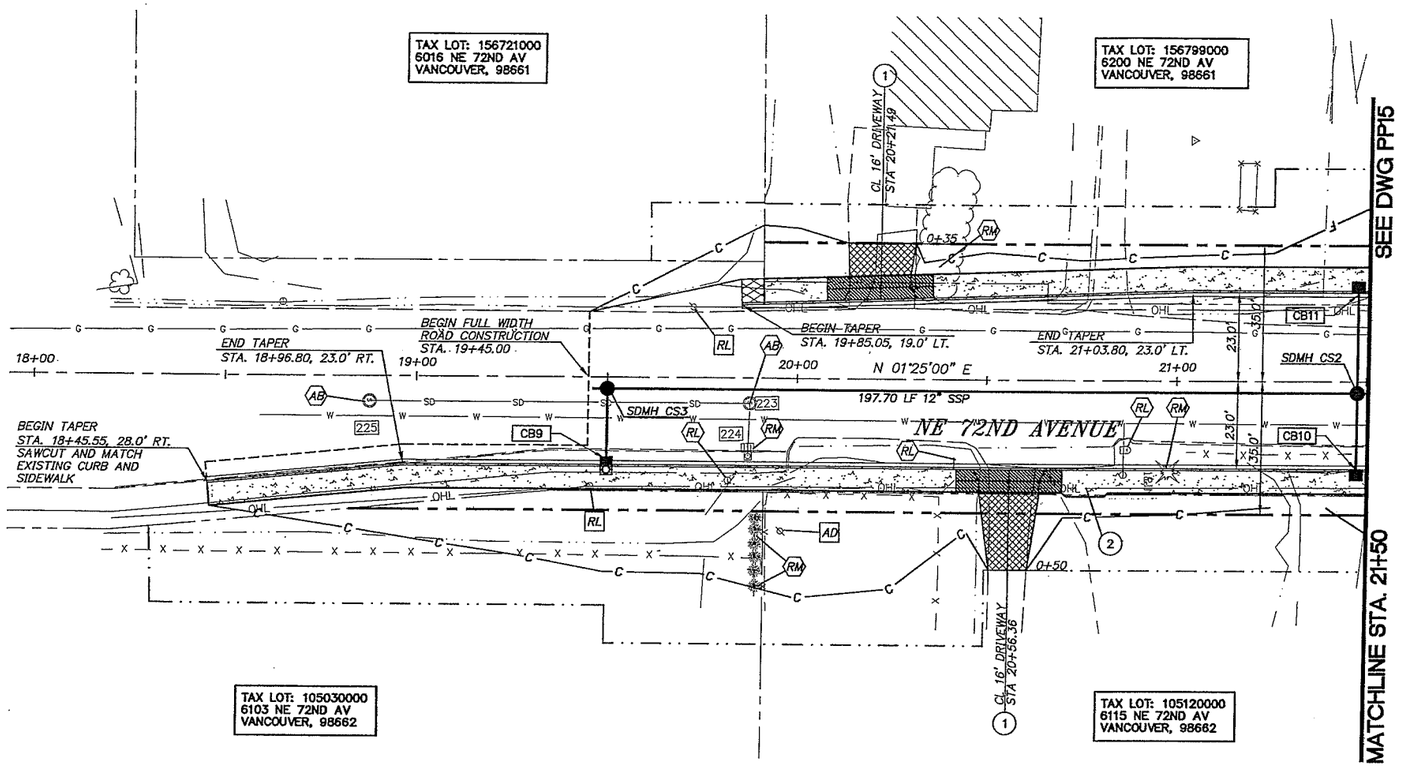
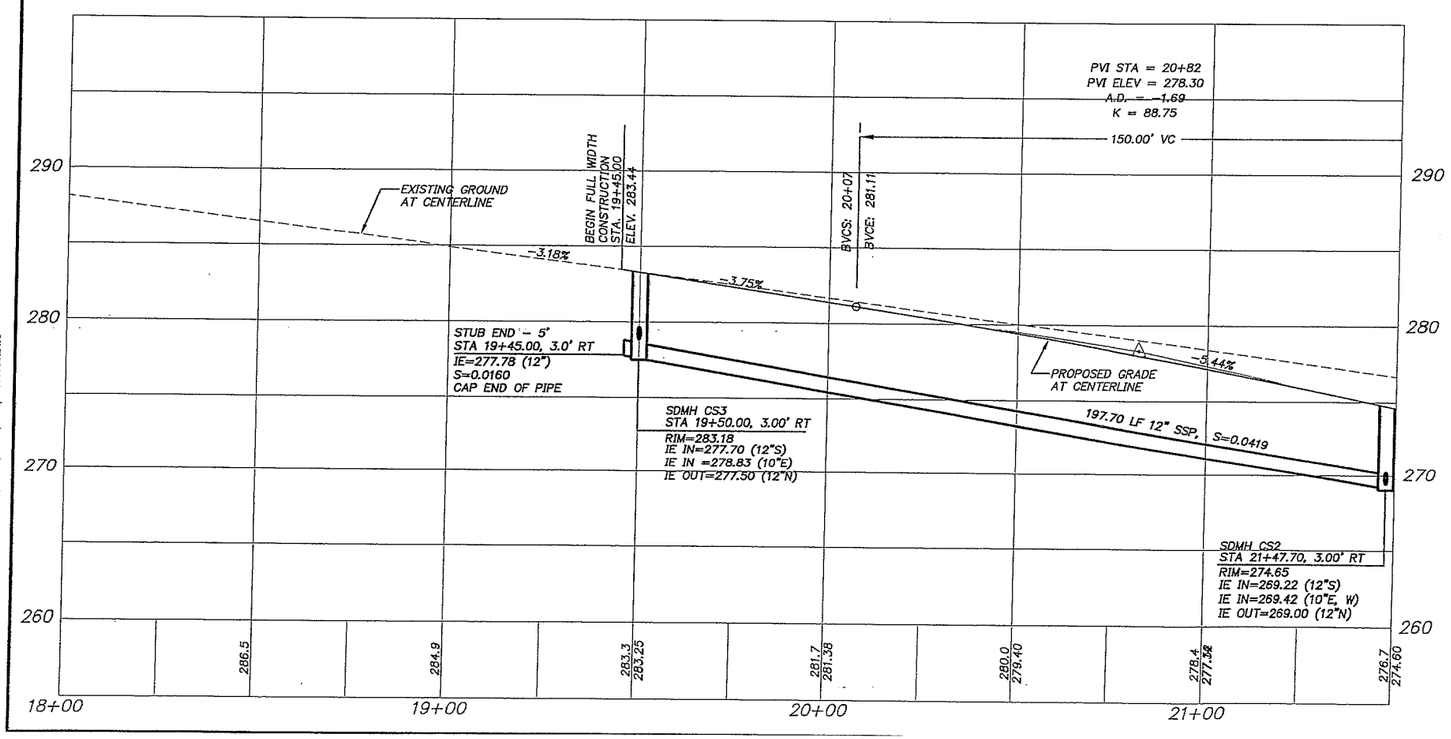
C944x500
C944x510
PKW WASH
S944b104
S944b106
S944B200





SCALE IN FEET
20 0 20 40

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
2. CONSTRUCT WIDENED SIDEWALK FOR MAILBOX PLACEMENT PER CLARK COUNTY STD. PLAN NO. F13.

CURB INLET INFORMATION

CB9 COMBINATION CURB INLET
ST. STA. 19+50.00, 23.00' RT
T.C. ELEV. = 283.23
I.E. (OUT) = 279.23
18 LF 10" STM. PIPE
S=0.0222 FT/FT

CB10 CURB INLET
ST. STA. 21+47.70, 23.00' RT
T.C. ELEV. = 274.65
I.E. (OUT) = 270.65
20 LF 10" STM. PIPE
S=0.0615 FT/FT

CB11 CURB INLET
ST. STA. 21+47.70, 23.00' LT
T.C. ELEV. = 274.65
I.E. (OUT) = 270.65
26 LF 10" STM. PIPE
S=0.0473 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: CONTRACTOR / CITY/COUNTY FORCES / OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP14

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PLAN AND PROFILE - NE 72ND AVENUE
STA. 18+00 TO STA. 21+50

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V: SHERYL 08/24/04 7:11pm ---> V:\PROJECT\11900\11944\DWG\C944S039.DWG

XREF LIST
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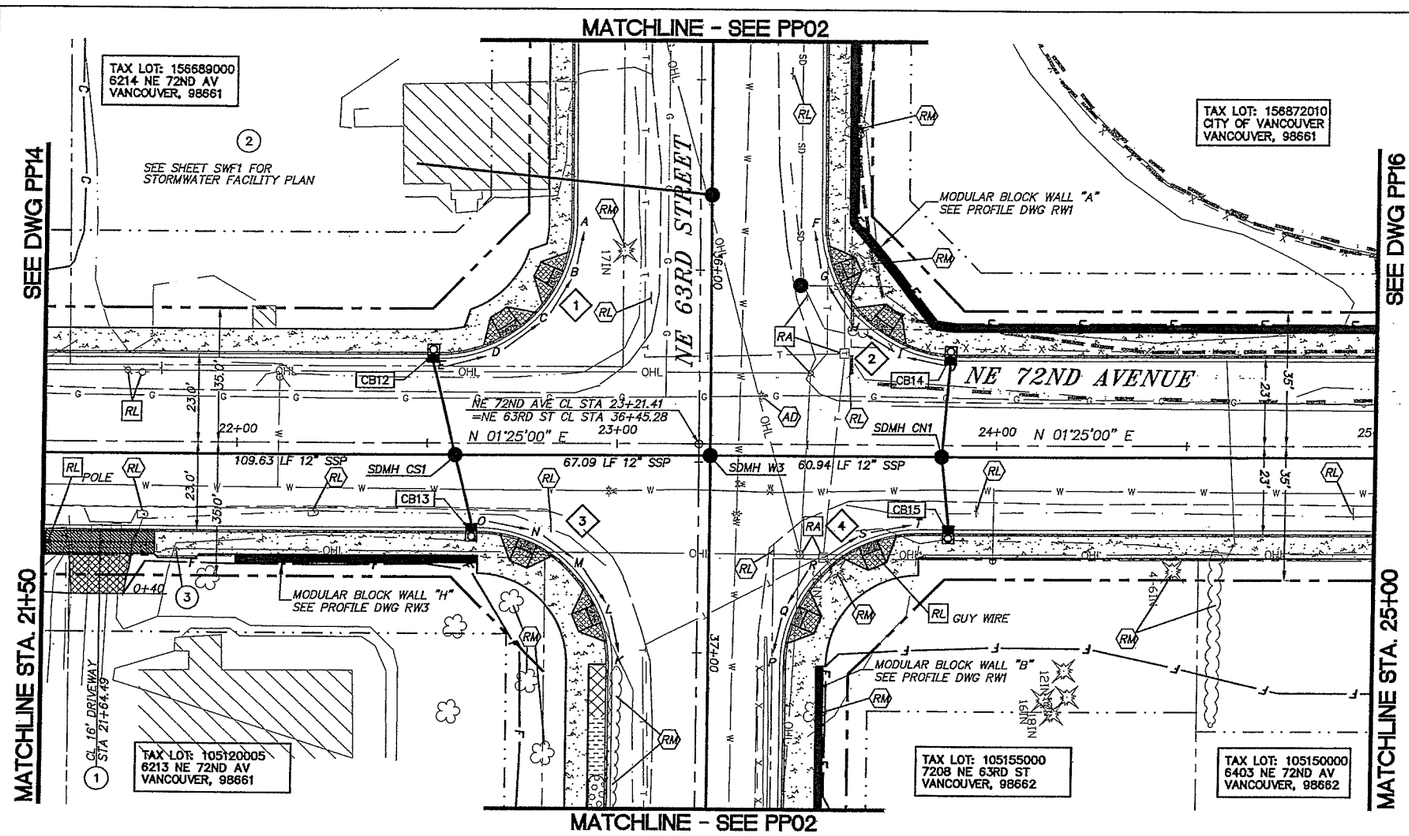
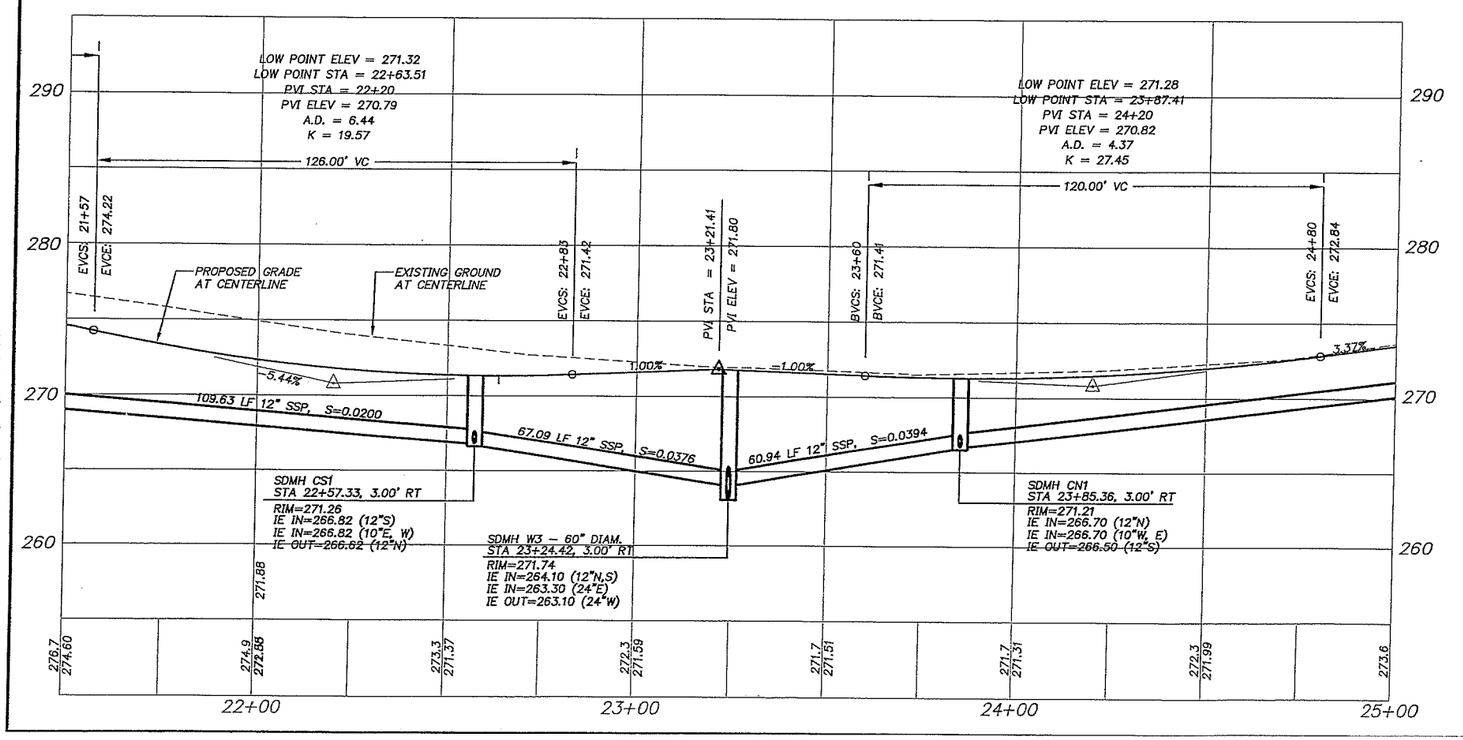


SCALE IN FEET
20 0 20 40



CURB RETURN TABLE

CURVE	STATION/OFFSET	SYMBOL Δ/4	T.O.C. ELEV.
1	BCR 35+86.78 33.0' RT	A	270.84
		B	271.02
Δ = 90°24'59"		C	271.10
R = 35.00'	ECR 36+21.80	D	271.18
L = 55.23'	68.3' RT	E	271.28
2	BCR 35+87.77 33.00' LT	F	270.85
		G	270.95
Δ = 89°35'01"		H	271.08
R = 35.00'	ECR 36+22.75	I	271.15
L = 54.72'	67.8' LT	J	271.21
3	BCR 37+03.06 23.0' RT	K	270.97
		L	271.04
Δ = 89°47'03"		M	271.11
R = 35.00'	ECR 36+68.06	N	271.18
L = 54.85'	57.9' RT	O	271.25
4	BCR 37+03.50 23.0' LT	P	270.99
		Q	271.22
Δ = 90°12'57"		R	271.36
R = 35.00'	ECR 36+68.50	S	271.29
L = 55.11'	58.1' LT	T	271.22

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15
2. SEE SHEET SWF1 FOR STORMWATER FACILITY PLAN AND DETAILS.
3. CONSTRUCT WIDENED SIDEWALK FOR MAILBOX PLACEMENT PER CLARK COUNTY STD. PLAN NO. F13.

CURB INLET INFORMATION

CB12 COMBINATION CURB INLET
ST. STA. 22+51.32, 23.00' LT
T.C. ELEV. = 271.28
I.E. (OUT) = 267.36
25 LF 10" STM. PIPE
S=0.0216 FT/FT

CB13 COMBINATION CURB INLET
ST. STA. 22+61.96 , 23.00' RT
T.C. ELEV. = 271.25
I.E. (OUT) = 267.24
19 LF 10" STM. PIPE
S=0.0221 FT/FT

CB14 COMBINATION CURB INLET
ST. STA. 23+87.41, 23.00' LT
T.C. ELEV. = 271.21
I.E. (OUT) = 267.24
24 LF 10" STM. PIPE
S=0.0225 FT/FT

CB15 COMBINATION CURB INLET
ST. STA. 23+87.41, 23.00' RT
T.C. ELEV. = 271.21
I.E. (OUT) = 267.21
18 LF 10" STM. PIPE
S=0.0283 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

NOT FOR CONSTRUCTION

DESIGNED: SLW
DRAWN: JRM
CRP: 330422
HORIZ. 1" = 20'
VERT. 1" = 5'
DATE: 3/11/2005
DWG: PP15

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PLAN AND PROFILE - NE 72ND STREET
STA. 21+50 TO STA. 25+00

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V: SHERYL 08/24/04 7:15pm ---> V:\PROJECT\11900\11944\DWG\C944S040.DWG

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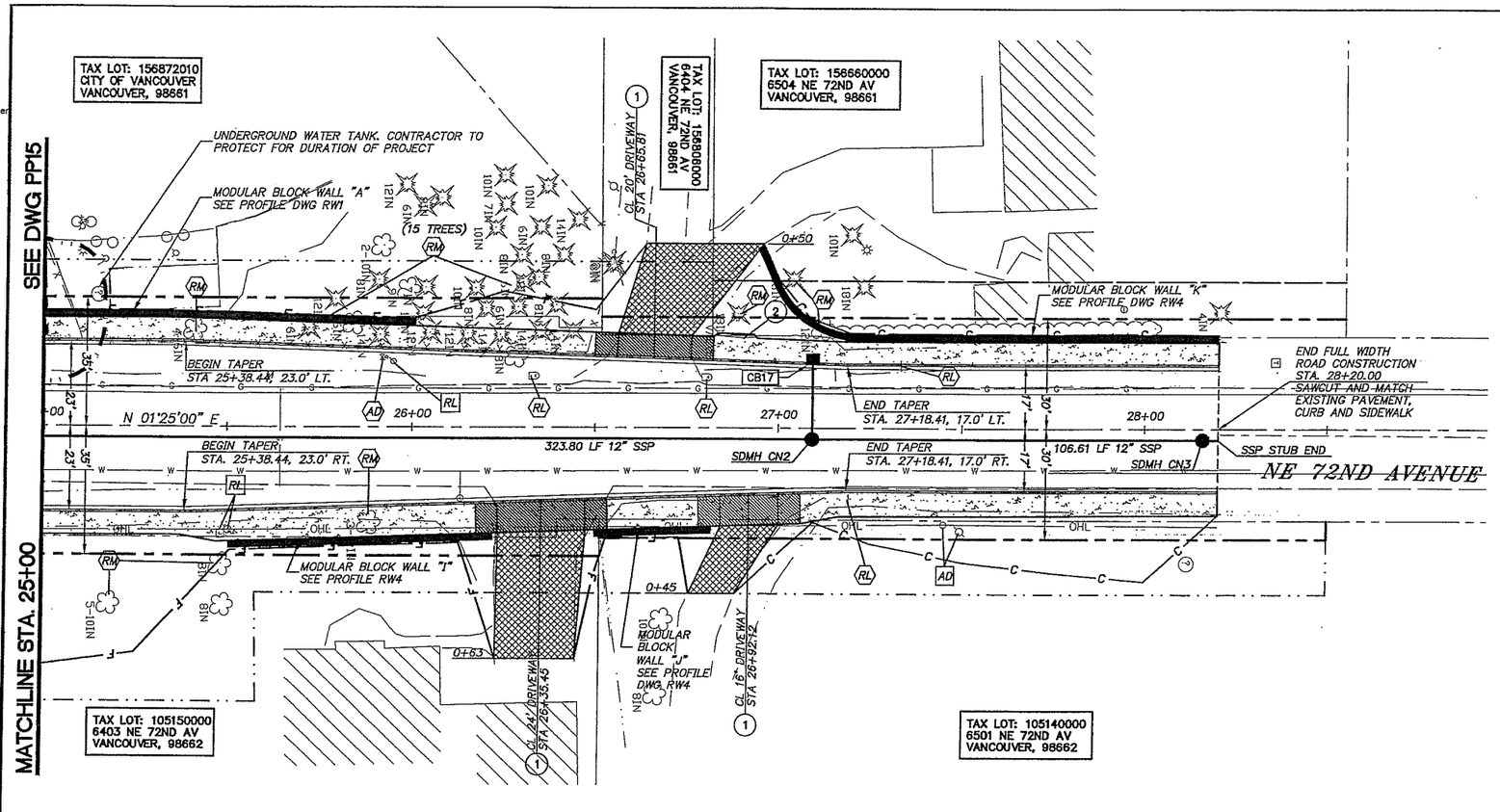

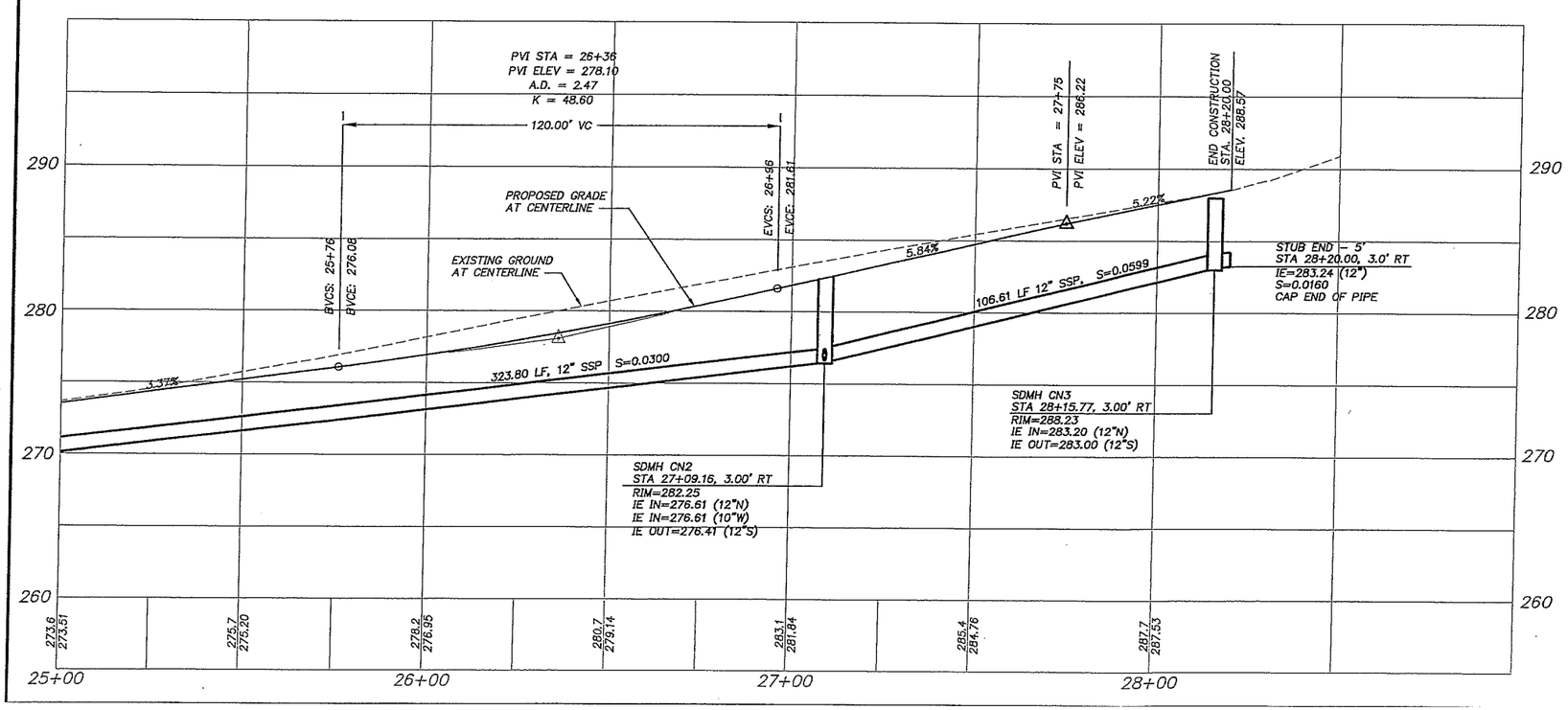

SCALE IN FEET
20 0 20 40

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 3 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F16
2. CONSTRUCT WIDENED SIDEWALK FOR MAILBOX PLACEMENT PER CLARK COUNTY STD. PLAN NO. F13.

CURB INLET INFORMATION

CB17 CURB INLET
ST. STA. 27+09.16, 17.31' LT
T.C. ELEV. = 282.52
I.E. (OUT) = 277.52
20 LF 10" STM. PIPE
S=0.0455 FT/FT

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ○ CITY/COUNTY FORCES □ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	PP16

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PLAN AND PROFILE – NE 72ND STREET
STA. 25+00 TO STA. 28+50

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V: SHERYL 08/24/04 7:18pm ---> V:\PROJECT\11900\11944\DWG\C944S041.DWG

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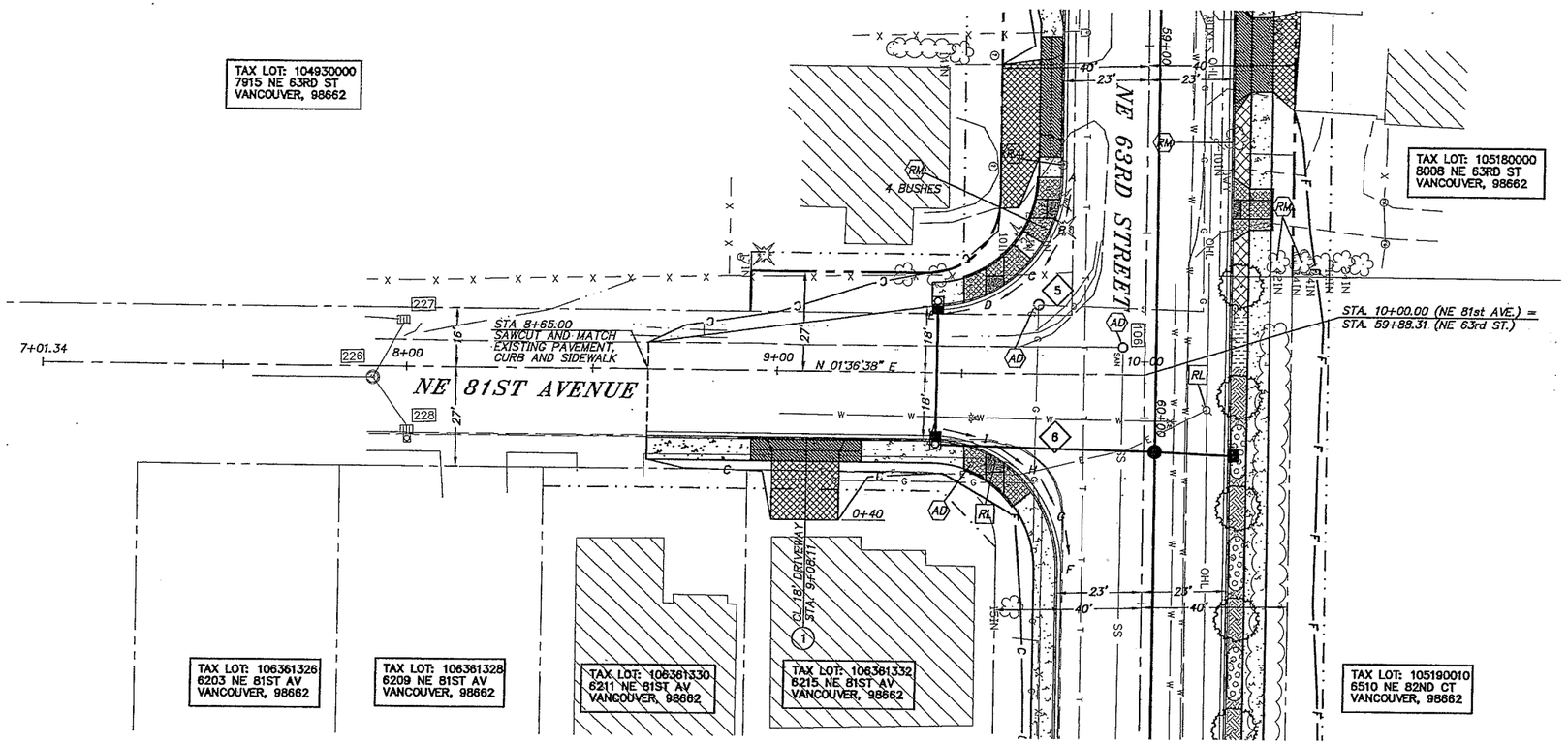

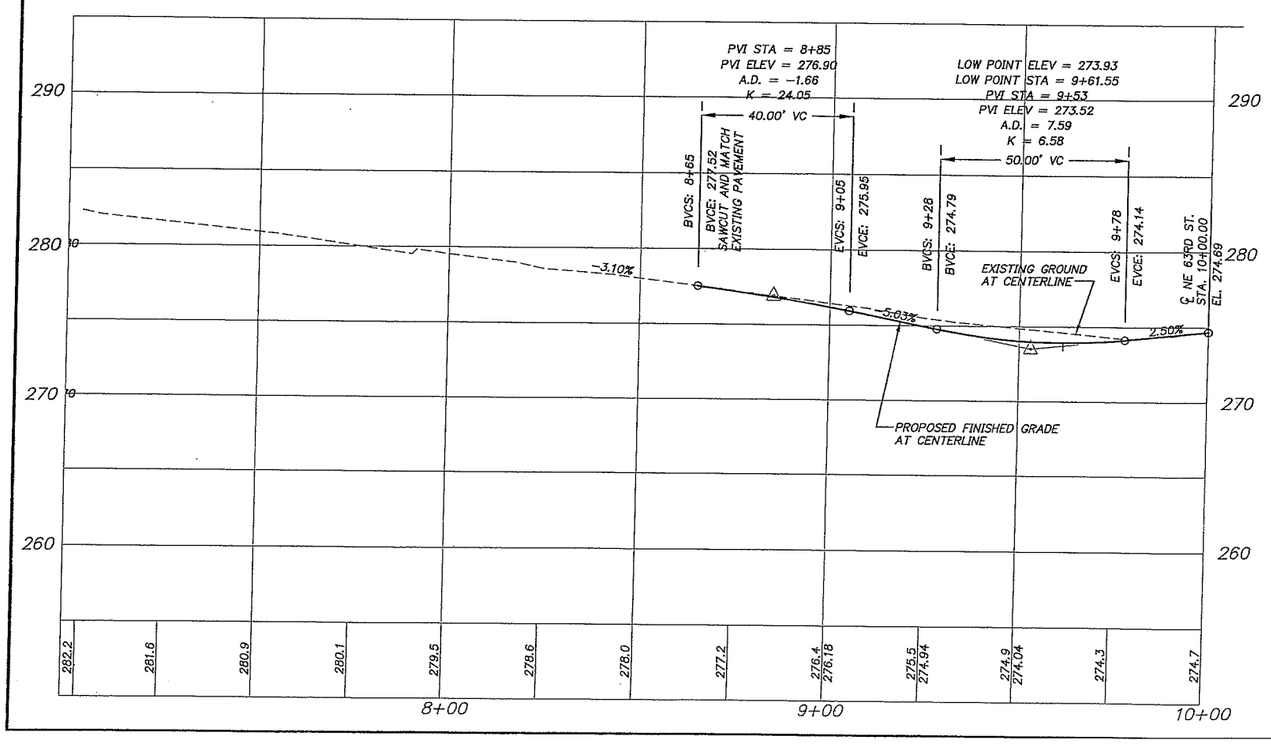

CURB RETURN TABLE

CURVE	STATION/OFFSET	SYMBOL Δ/4	T.O.C. ELEV.
5	BCR 59+34.92	A	275.50
	23.00' RT	B	275.15
Δ = 90°23'23"		C	274.58
R = 35.00'	ECR 59+69.92	D	274.44
L = 55.22'	58.24' RT	E	274.29
6	BCR 60+40.92	F	273.98
	23.00' RT	G	274.07
Δ = 89°36'37"		H	274.14
R = 35.00'	ECR 60+05.92	I	274.20
L = 54.74'	57.76' RT	J	274.26

CONSTRUCTION NOTES

1. CONSTRUCT TYPE 2 CEMENT CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F15

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ⬭ CITY/COUNTY FORCES ☐ OTHERS

NOT FOR CONSTRUCTION

DESIGNED: SLW
DRAWN: JRM
CRP: 330422
HORIZ. 1" = 20'
VERT. 1" = 5'
DATE: 3/11/2005
DWG: 101

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Phone: (360) 737-8611

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PLAN AND PROFILE
NE 81ST AVENUE

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V: SADIE 02/24/04 2:59pm ---> R:\DWG\S944S036.DWG

XREF LIST
Ltscale: 20

Resolved
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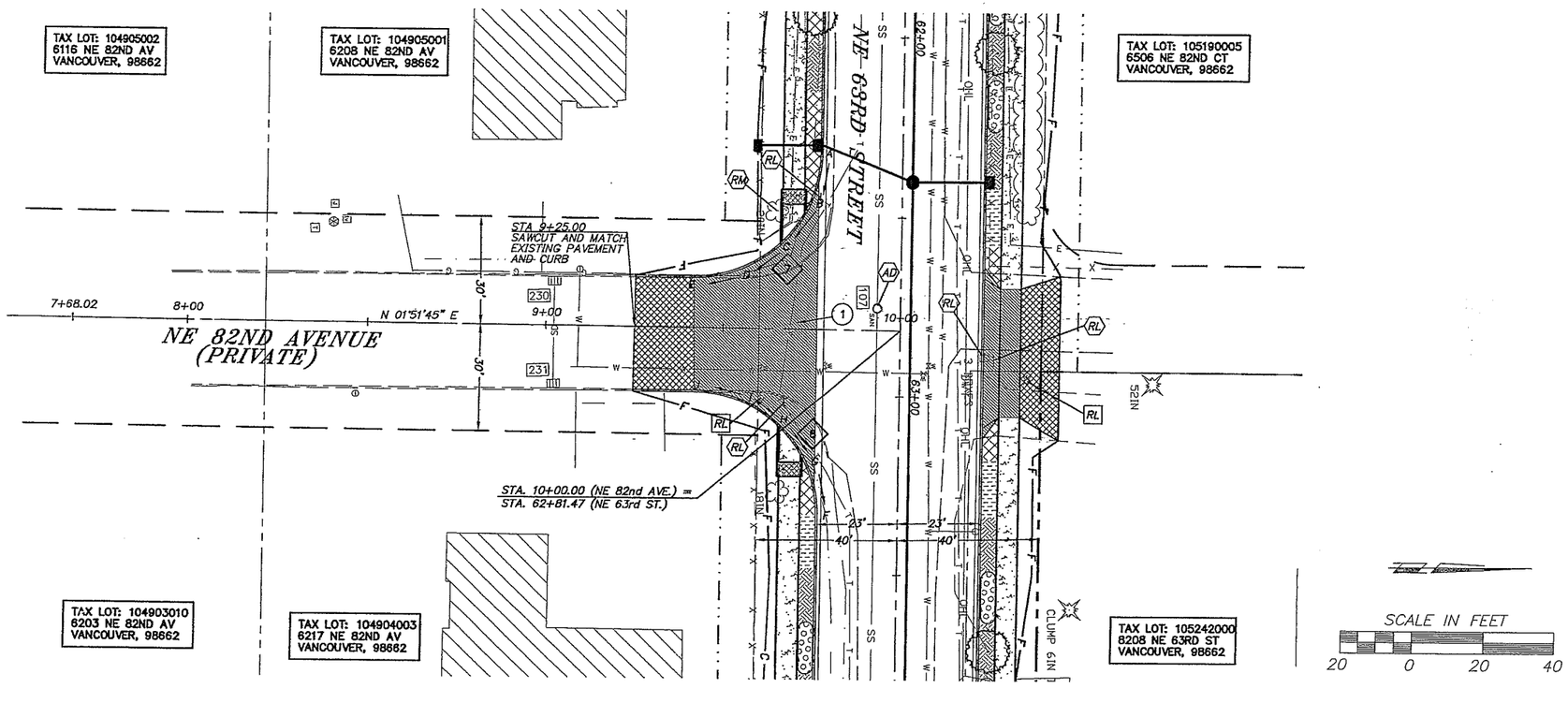

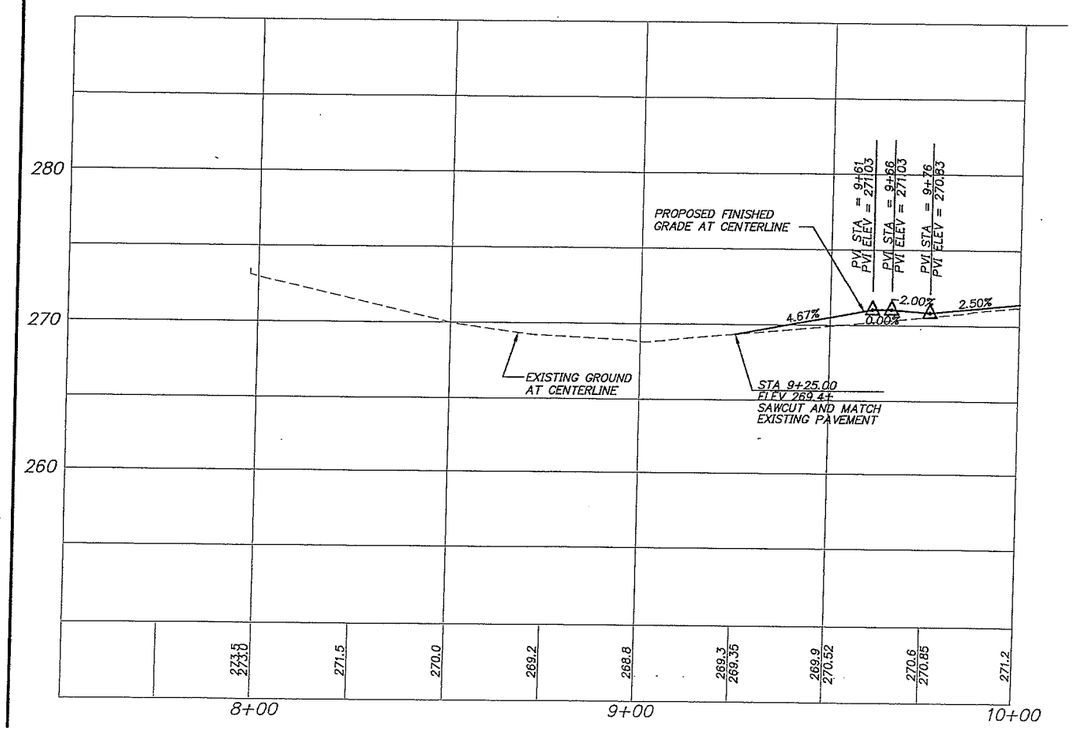

CURB RETURN TABLE

CURVE	STATION/OFFSET	SYMBOL Δ/4	T.O.C. ELEV.
7	BCR 62+31.85	A	271.90
	23.00' RT	B	271.57
Δ = 90°16'57"		C	271.12
R = 35.00'	ECR 62+66.85	D	270.87
L = 55.15'	58.17' RT	E	270.27
8	BCR 63+33.40	F	270.79
	23.00' RT	G	271.02
Δ =89°30'51"		H	271.20
R = 35.00'	ECR 62+98.40	I	270.76
L = 54.68'	57.70' RT	J	270.22

CONSTRUCTION NOTES

1. CONSTRUCT MAJOR COMMERCIAL CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F17, ON SHEET D02.

OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ◯ CITY/COUNTY FORCES ☐ OTHERS

DESIGNED: SLW
DRAWN: JRM
CRP: 330422
HORIZ. 1" = 20'
VERT. 1" = 5'
DATE: 3/11/2005

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PLAN AND PROFILE
NE 82ND AVENUE

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WASHINGTON

H: SADIE 02/24/04 3:00pm ---> R:\DWG\C9445037.DWG

XREF LIST
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Resolved
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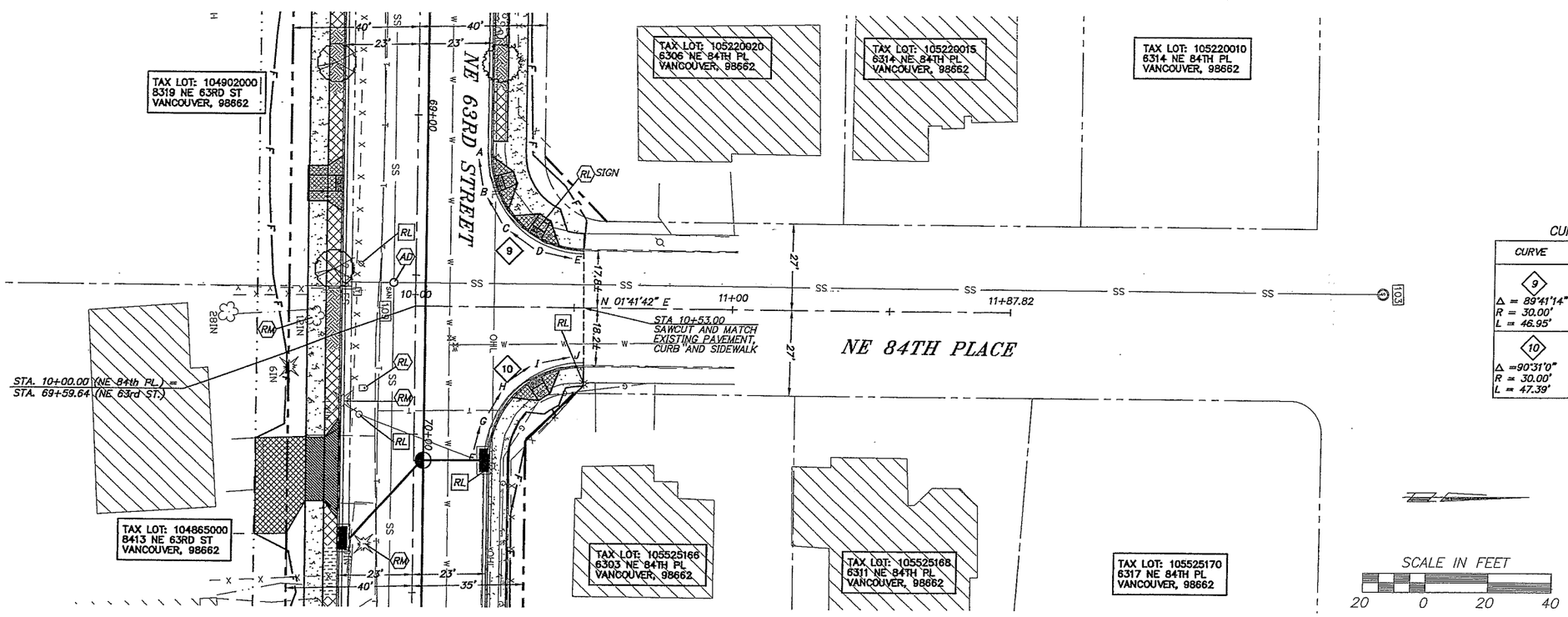
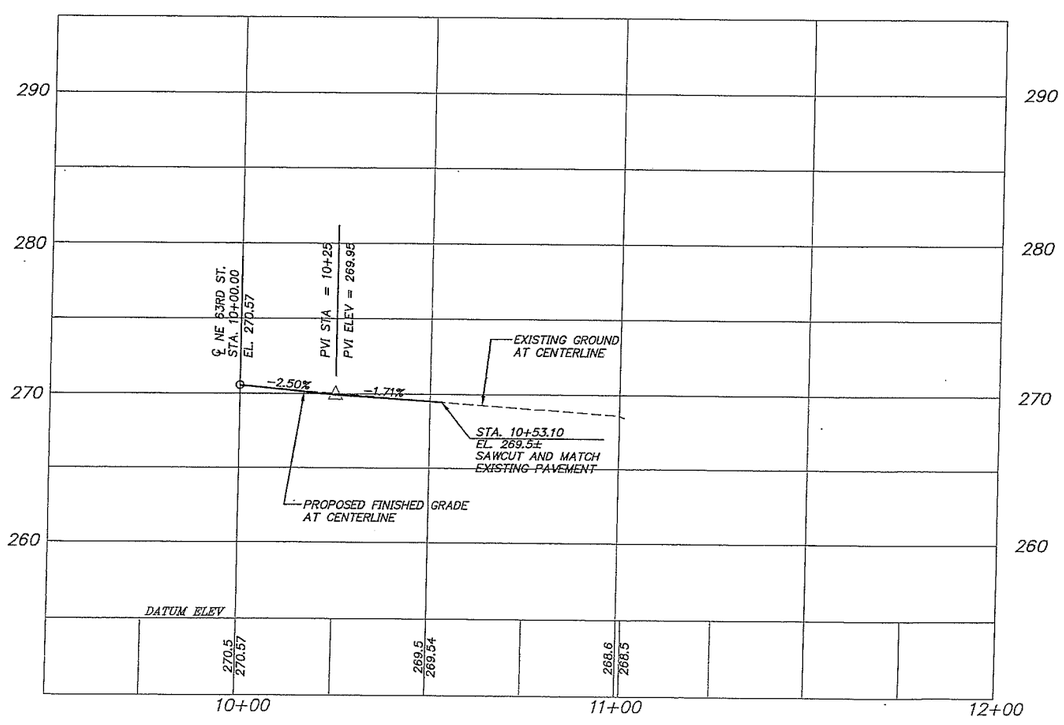
S944B200



CURB RETURN TABLE

CURVE	STATION/OFFSET	SYMBOL Δ/4	T.O.C. ELEV.
9	BCR 69+12.13	A	269.05
	23.00' LT	B	269.36
Δ = 89°41'14"		C	269.50
R = 30.00'	ECR 69+42.13	D	269.60
L = 46.95'	52.84' LT	E	269.47
10	BCR 70+08.32	F	271.95
	23.00' LT	G	271.45
Δ = 90°31'0"		H	270.65
R = 30.00'	ECR 69+78.31	I	269.87
L = 47.39'	53.26' LT	J	269.46



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR ◯ CITY/COUNTY FORCES ☐ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	103

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PLAN AND PROFILE
NE 84TH PLACE

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V: SHERYL 08/24/04 7:21pm ---> V:\PROJECT\11900\11944\DWG\C944S044.DWG

XREF LIST
Ltscale: 20
Resolved
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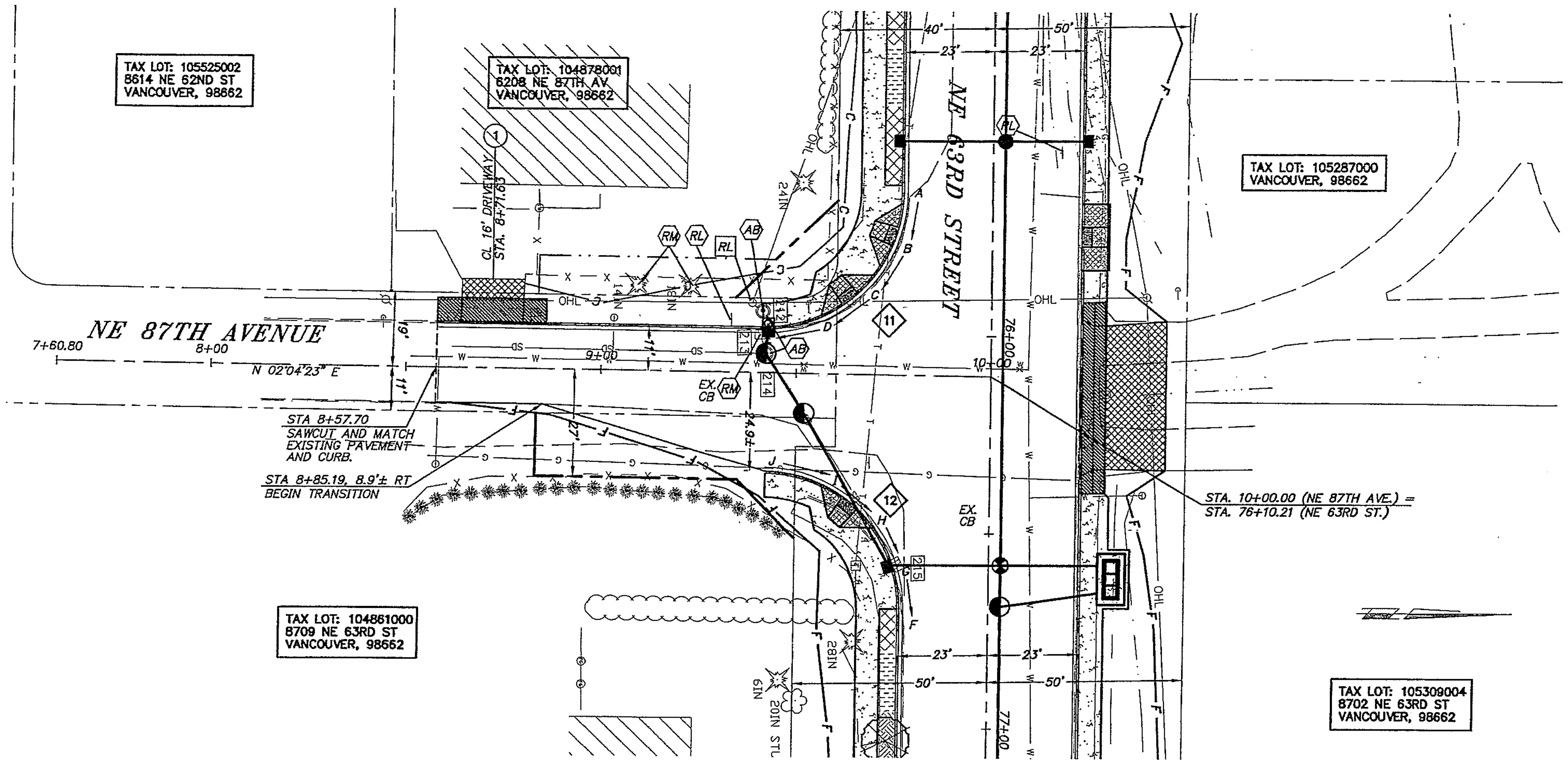
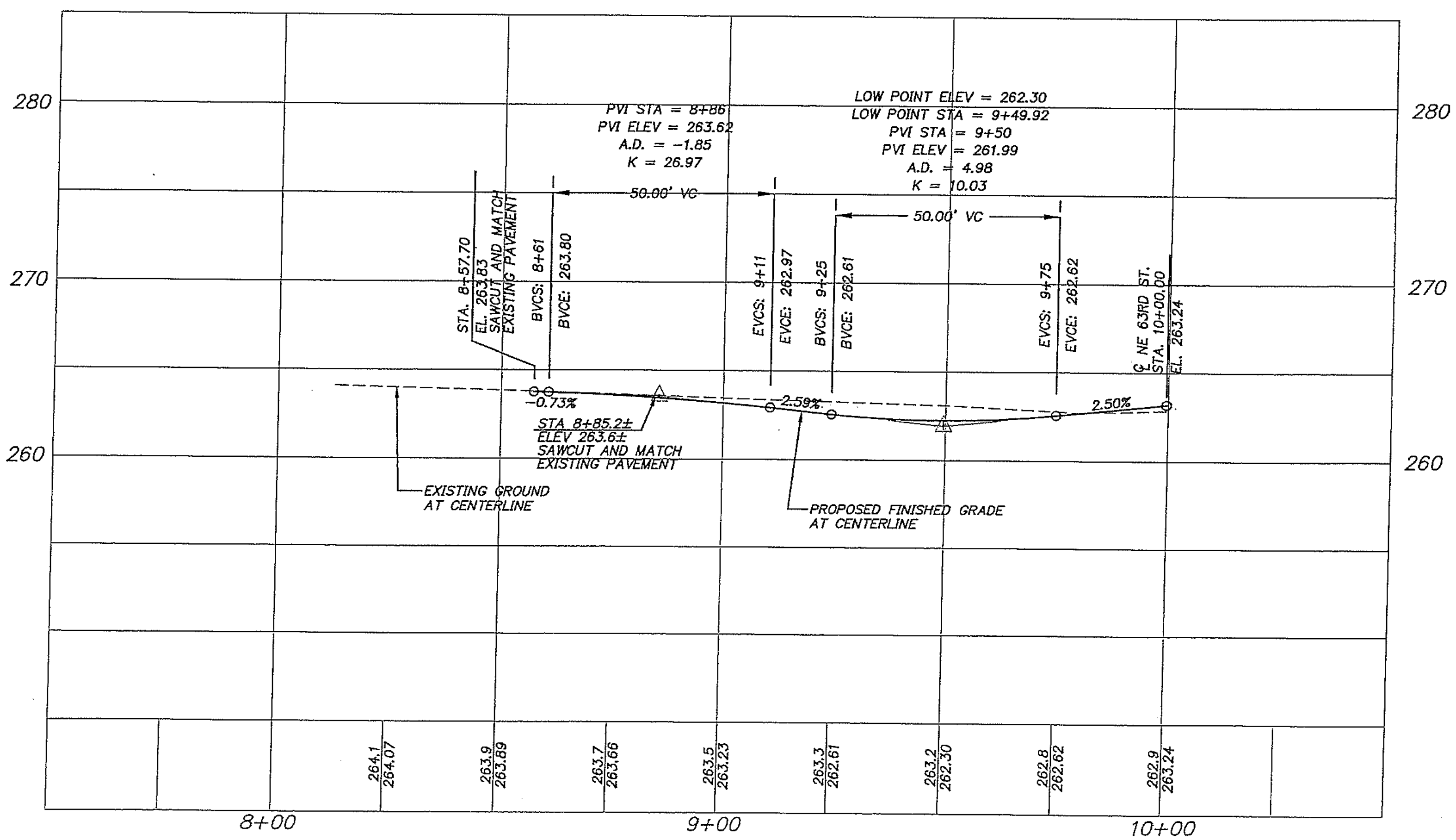
S944B200



SCALE IN FEET
20 0 20 40

CURB RETURN TABLE

CURVE	STATION/OFFSET	SYMBOL △/4	T.O.C. ELEV.
11: △ = 90°52'25", R = 35.00', L = 55.51'	BCR 75+63.16 23.00' RT	A	265.26
		B	264.52
		C	263.54
	ECR 75+98.15 58.53' RT	D	262.75
		E	262.55
12: △ = 89°11'38", R = 35.00', L = 54.49'	BCR 76+69.24 23.00' RT	F	260.72
		G	261.29
	ECR 76+34.21 57.50' RT	H	261.73
		I	262.04
		J	262.21



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR
○ CITY/COUNTY FORCES
□ OTHERS

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proud past, promising future

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS
PLAN AND PROFILE
NE 87TH AVENUE

otak Incorporated
700 Washington St., Suite 401
Vancouver, WA 98660

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555
"It's the Law"

DESIGNED:	SLW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005

V: SHERYL 08/24/04 7:22pm --> V:\PROJECT\11900\11944\DWG\C944S045.DWG

XREF LIST
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PKW WASH
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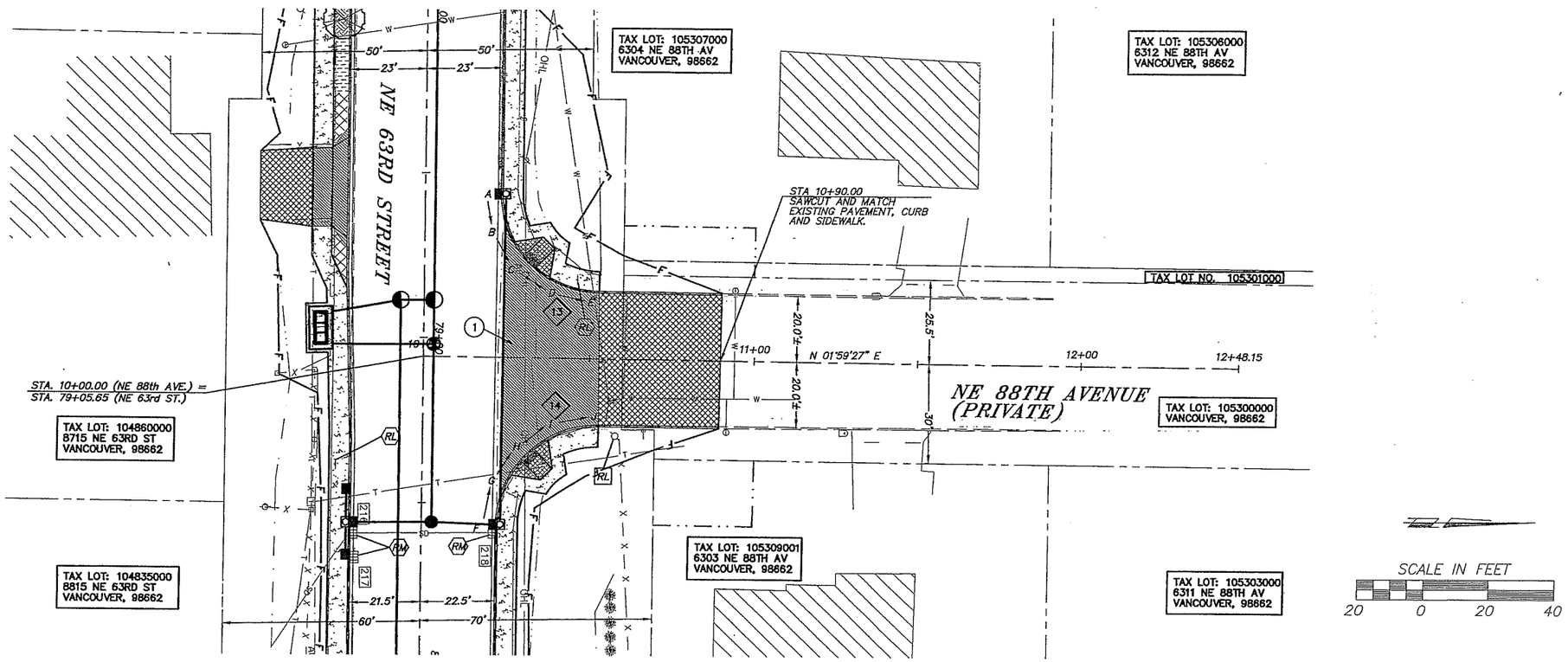
S944b106
S944B200

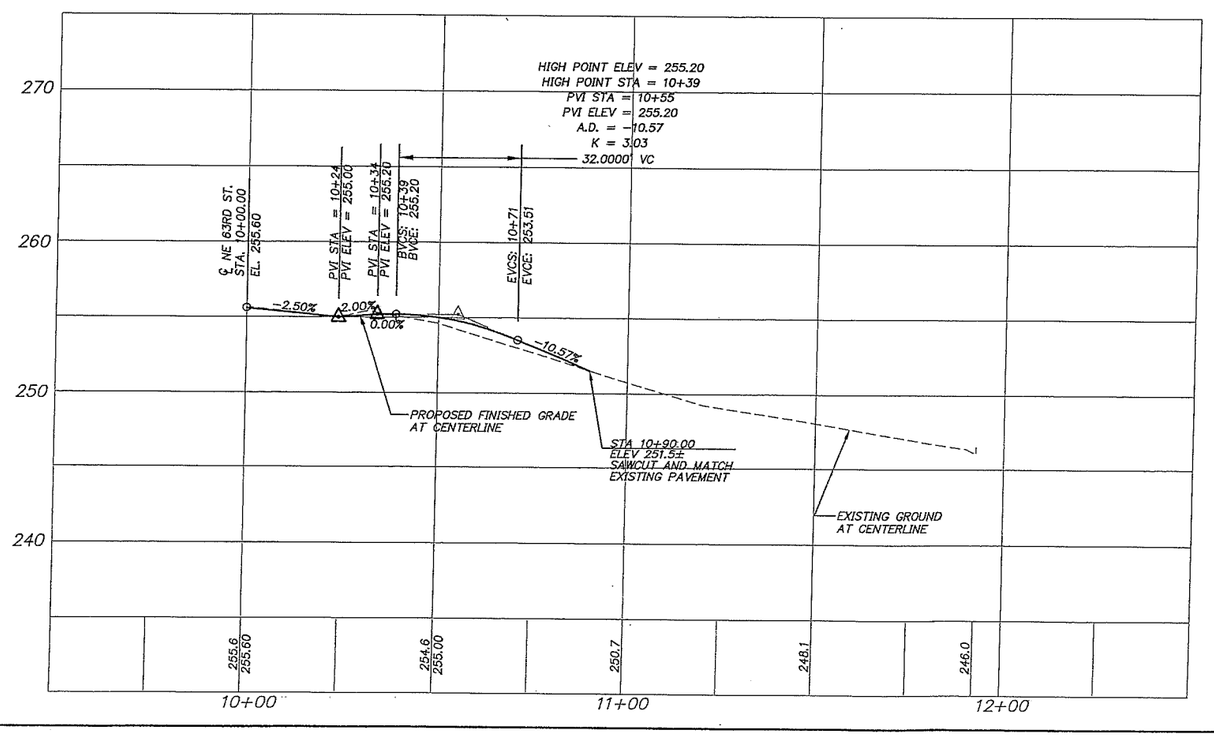


CURB RETURN TABLE

CURVE	STATION/OFFSET	SYMBOL Δ/4	T.O.C. ELEV.
13	BCR 78+56.38	A	256.01
	23.00' LT	B	255.74
Δ = 89°16'43"		C	255.47
R = 30.00'	ECR 78+86.38	D	255.30
L = 46.75'	52.61' LT	E	254.69
14	BCR 79+56.47	F	255.37
	22.50' LT	G	255.02
Δ = 90°34'50"		H	254.89
R = 30.00'	ECR 79+26.47	I	254.79
L = 47.43'	52.81' LT	J	254.69

CONSTRUCTION NOTES

1. CONSTRUCT COMMERCIAL CONCRETE DRIVEWAY APPROACH PER CLARK COUNTY STD. PLAN NO. F17 ON SHEET D02.



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: CONTRACTOR / CITY/COUNTY FORCES / OTHERS

NOT FOR CONSTRUCTION

DESIGNED: SLW
DRAWN: JRM
CRP: 330422
HORIZ. 1" = 20'
VERT. 1" = 5'
DATE: 3/11/2005
DWG: 105

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KIRK W. EDEMANN 22440 WASHINGTON PROFESSIONAL ENGINEER

otak Incorporated 700 Washington St., Suite 401 Vancouver, WA 98660 Phone: (360) 797-4015

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NE 88TH AVENUE

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V: SHERYL 05/27/04 5:20pm --> V:\PROJECT\11900\11944\DWG\C9445045.DWG

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Ltscale: 20
Resolved
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PKW WASH
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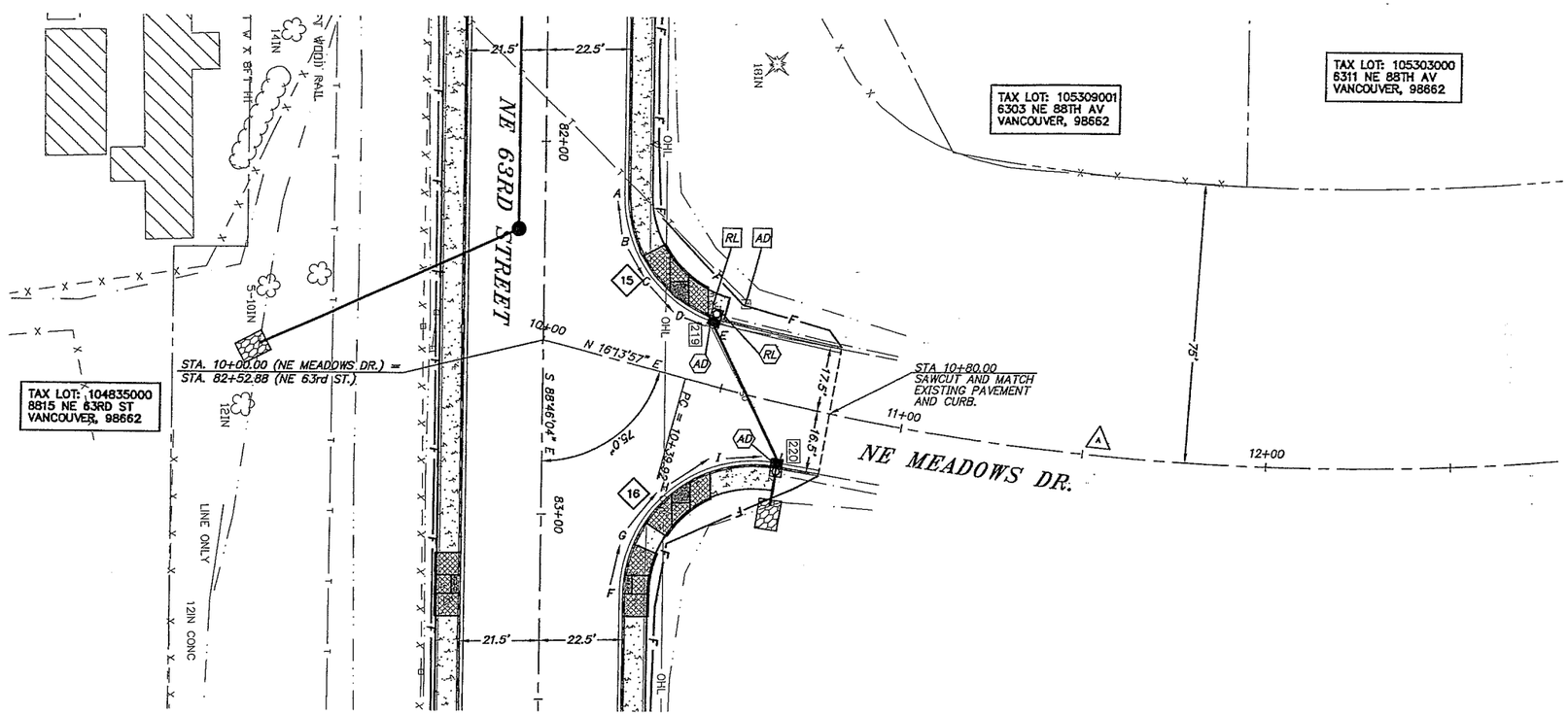
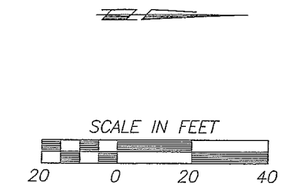
S944B200



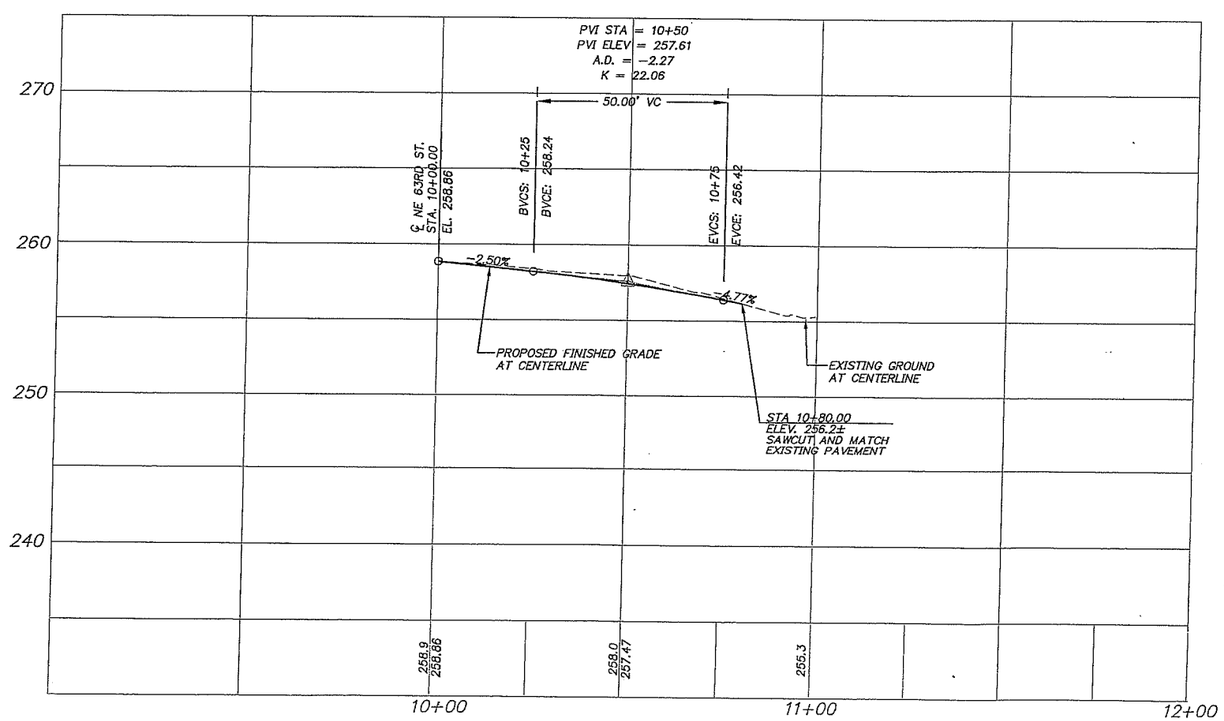


CURB RETURN TABLE

CURVE	STATION/OFFSET	SYMBOL Δ/4	T.O.C. ELEV.
15	BCR 82+13+74	A	258.36
	22.50' LT	B	258.42
Δ = 75°29'10"		C	258.32
R = 35.00'	ECR 82+47.63	D	258.06
L = 46.11'	48.73' LT	E	257.67
16	BCR 83+21.32	F	259.23
	22.50' LT	G	258.83
Δ =99°50'41"		H	258.14
R = 35.00'	ECR 82+86.83	I	257.45
L = 60.99'	63.48' LT	J	256.76

CENTERLINE CURVE TABLE

A	Δ =37°59'21" R = 700.00' L = 464.13'



OBJECT TO BE:

REMOVED	= RM
RELOCATED	= RL
ABANDONED	= AB
REPLACED & RELOCATED	= RP
RELOCATED & ADJUSTED TO GRADE	= RA
ADJUSTED TO GRADE	= AD
TRIMMED	= T

BY: ⬡ CONTRACTOR
◯ CITY/COUNTY FORCES
□ OTHERS

NOT FOR CONSTRUCTION

DESIGNED:	SLW
DRAWN:	JRM
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 5'
DATE:	3/11/2005
DWG:	106

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PAMELA ANN WILDEMANN
STATE OF WASHINGTON
22440
REGISTERED PROFESSIONAL ENGINEER

otak Incorporated
700 Washington St. Suite 401
Vancouver, WA 98660
Phone: (360) 737-8613

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PLAN AND PROFILE
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WASHINGTON

V: JOHNMA 08/26/04 6:07pm ---> R:\DWG\C944S047.DWG

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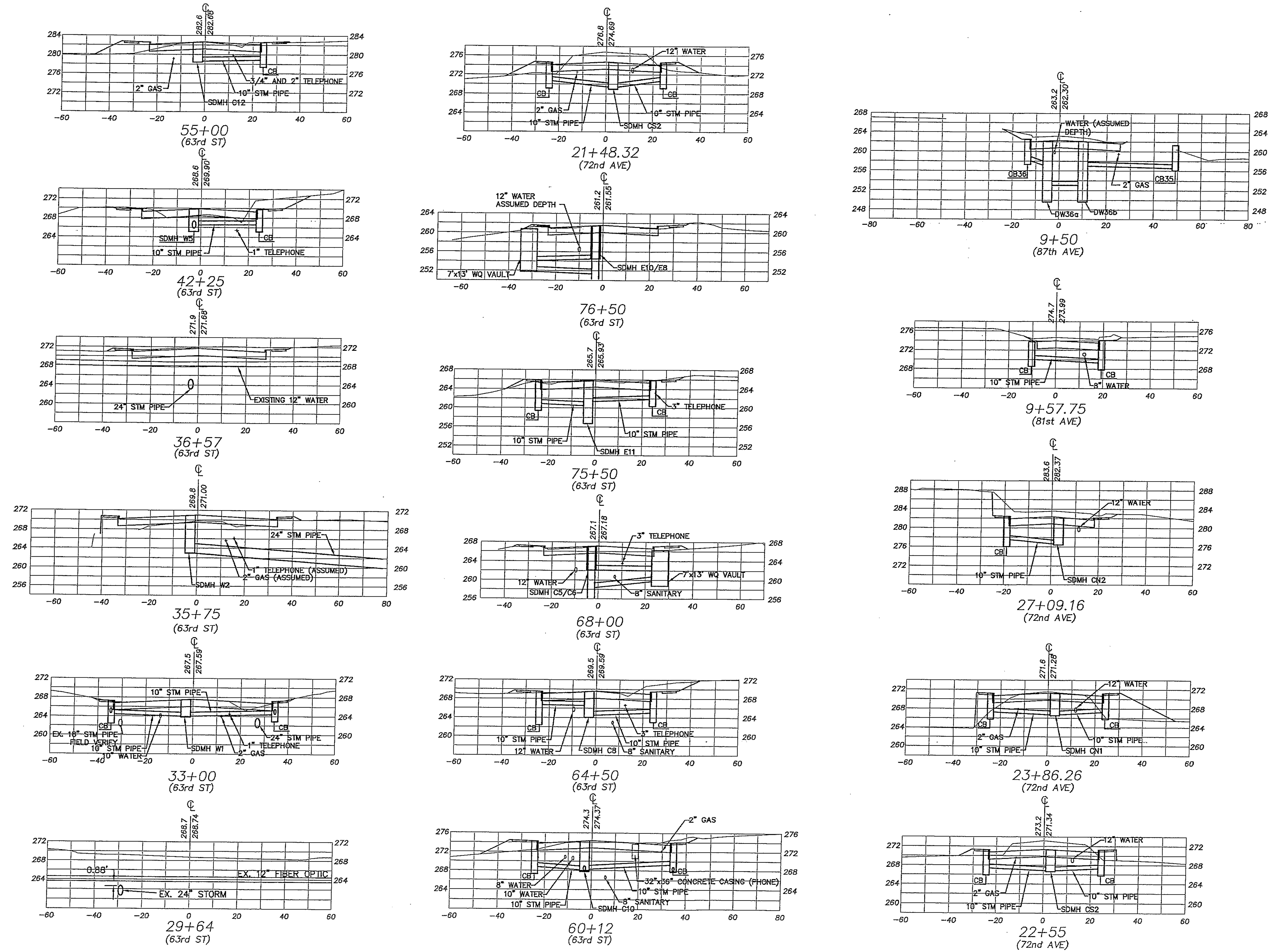

9:20:55 AM PST

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PAMELA L. WIEDEMANN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER

DESIGNED:	PKW
DRAWN:	GME
CRP:	330422
HORIZ.	1" = 20'
VERT.	1" = 10'
DATE:	3/11/2005
DWG:	PH01

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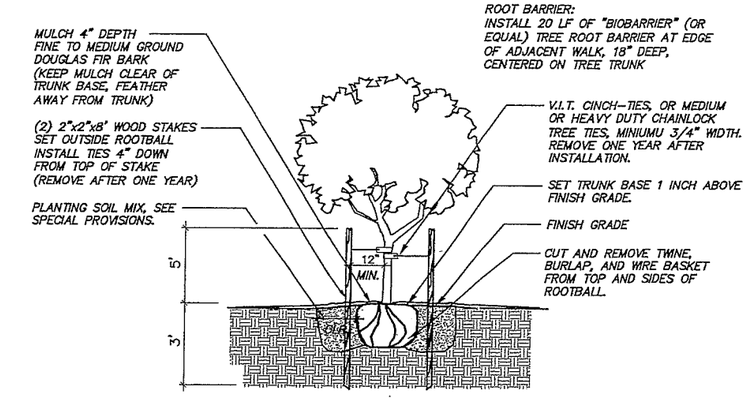
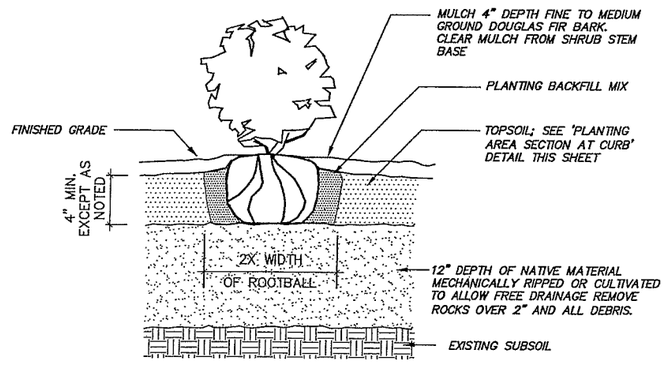
W WASH



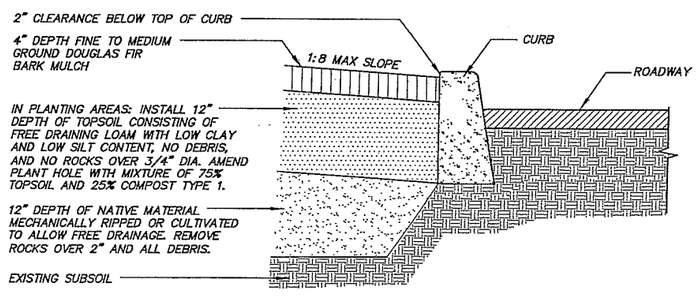
TREE STAKING DETAIL

(NOT TO SCALE)



SHRUB & GROUND COVER PLANTING DETAIL

(NOT TO SCALE)



PLANTING AREA SECTION AT CURB

(NOT TO SCALE)

PLANT MATERIAL LEGEND

SYMBOL	QTY (TOTAL ALL SHTS)	COMMON NAME	BOTANICAL NAME	SPACING	SIZE AND DESCRIPTION
TREES					
	xx	PAPERBARK MAPLE	ACER GRISEUM	30' O.C. OR AS SHOWN	2" CALIPER
	xx	AMERICAN HORNBEAM	CARPINUS CAROLINIANA	30' O.C. OR AS SHOWN	2" CALIPER
SHRUBS AND GROUNDCOVERS					
	xxx	MOONLIGHT BROOM	CYTISUS SCOPARIUS 'MOONLIGHT'	36 IN. O.C.	2 GALLON
	xxxx	KINNIKINNICK	ARCOSTAPHYLOS UVA-URSI 'MASSACHUSETTS'	30 IN. O.C. 2 STAGGERED ROWS	1 GALLON
	xxxx	ORCHID ROCKROSE	CISTUS PURPUREOUS	30 IN. O.C. 1 ROW CENTERED IN PLANTER	1 GALLON
		SUNROSE	HELIANTHEMUM NUMMULARIUM	30 IN. O.C. 2 STAGGERED ROWS	1 GALLON

PLANTING NOTES

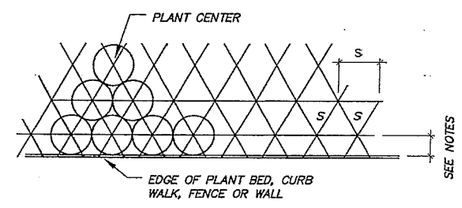
1. PLANT CENTER OF SHRUBS A MINIMUM OF 24 INCHES FROM STREET CURBS. PLANT CENTER OF GROUND COVERS A MINIMUM OF 18" FROM STREET CURBS.

2. TREES IN PLANTING STRIPS TO BE CENTERED IN PLANTER WITH SPACING SHOWN ON PLAN.

3. INSTALL STREET TREES PER TREE STAKING DETAIL.

4. LEAVE PLANT NAME IDENTIFICATION TAGS ON TEN PERCENT OF ALL TREES AND SHRUBS INSTALLED TO AID COUNTY INSPECTORS IN VERIFYING THAT SPECIFIED PLANTS HAVE BEEN INSTALLED.

5. INSTALL 4-INCH MIN. DEPTH OF MEDIUM FIR BARK MULCH LAYER OVER ALL PLANTING AREAS AFTER INSTALLATION OF TREES AND GROUND COVERS.



TRIANGULAR PLANT SPACING

(NOT TO SCALE)

DESIGNED: SLW
DRAWN: SLN
CRP: 330422
HORIZ. NA
VERT. NA
DATE: 3/11/2005

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LANDSCAPE DETAILS AND NOTES

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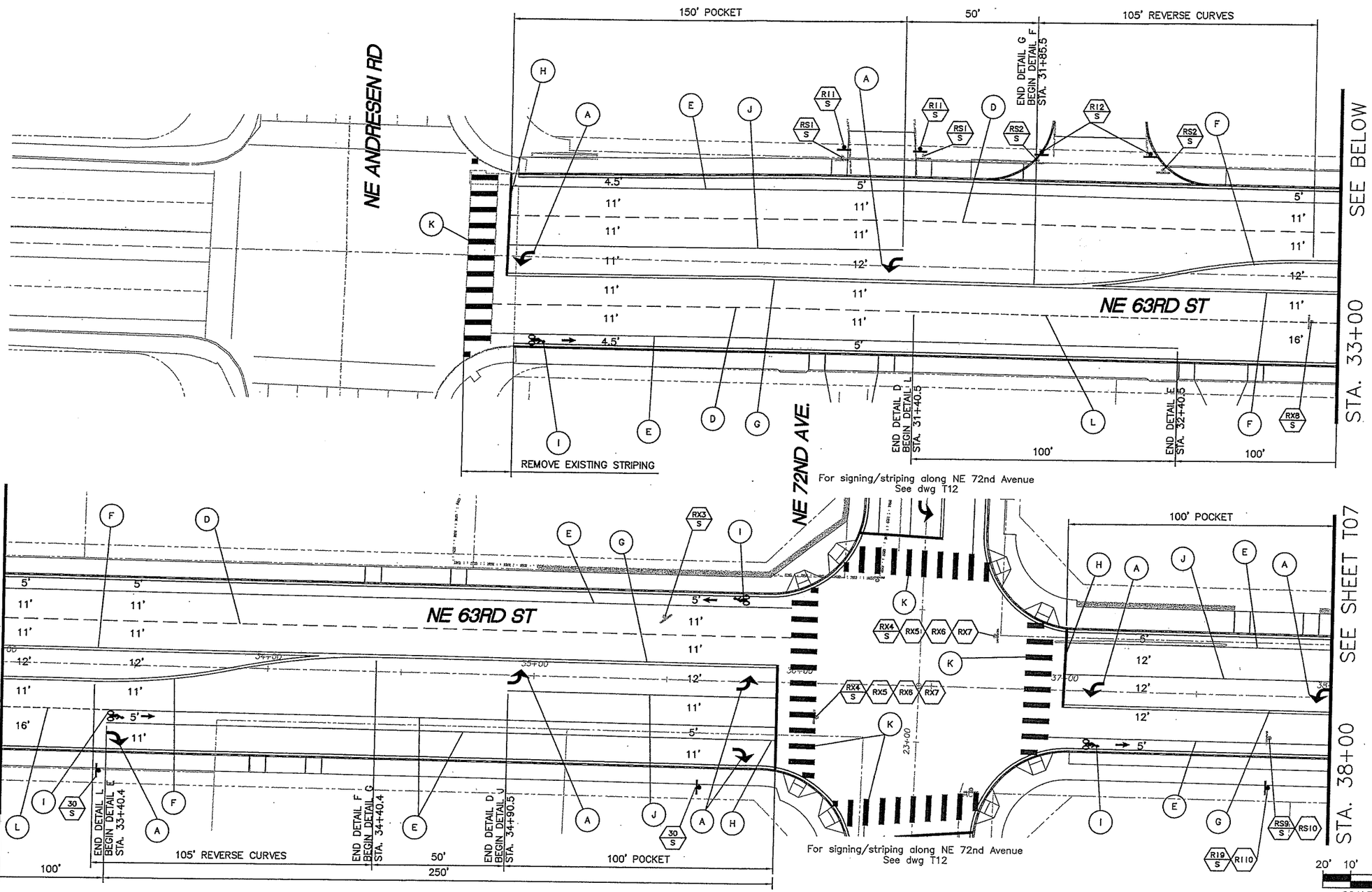
V: JOHNMA 08/26/04 3:54pm --> R:\DWG\Q944S049.DWG



GENERAL NOTES

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5. Crosswalks, stop bars, and arrows shall be thermoplastic.
6. Refer to signing, striping and pavement marking details on dwgs T13 to T15.
7. Contractor to coordinate with C-Tran two weeks in advance for bus stop sign removal/installation.
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9. The contractor shall provide temporary pavement markings in accordance with WSDOT "Standard Specifications for Road, Bridge and Municipal Construction" section 8.23.

SHEET LEGEND

- (X) Striping detail, see dwg T13 for details.
- (N/M) Install new sign (N) on new sign support (M).
- (RSN/M) Remove and save existing sign (N) and sign support (M).
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- New sign on new steel breakaway sign post.
- Existing sign on existing support.
- M = Material: (W) = Wood, (S) = Steel, (LP) = Light Pole

PERMANENT SIGNING AND STRIPING NOT IN CONTRACT Work to be performed by County Forces

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DESIGNED: CTS
DRAWN: JCLD
CRP: 330422
HORIZ.
VERT.
DATE: 03/11/2005
DWG: T06

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NE 63RD STREET
SIGNING/STRIPING PLAN

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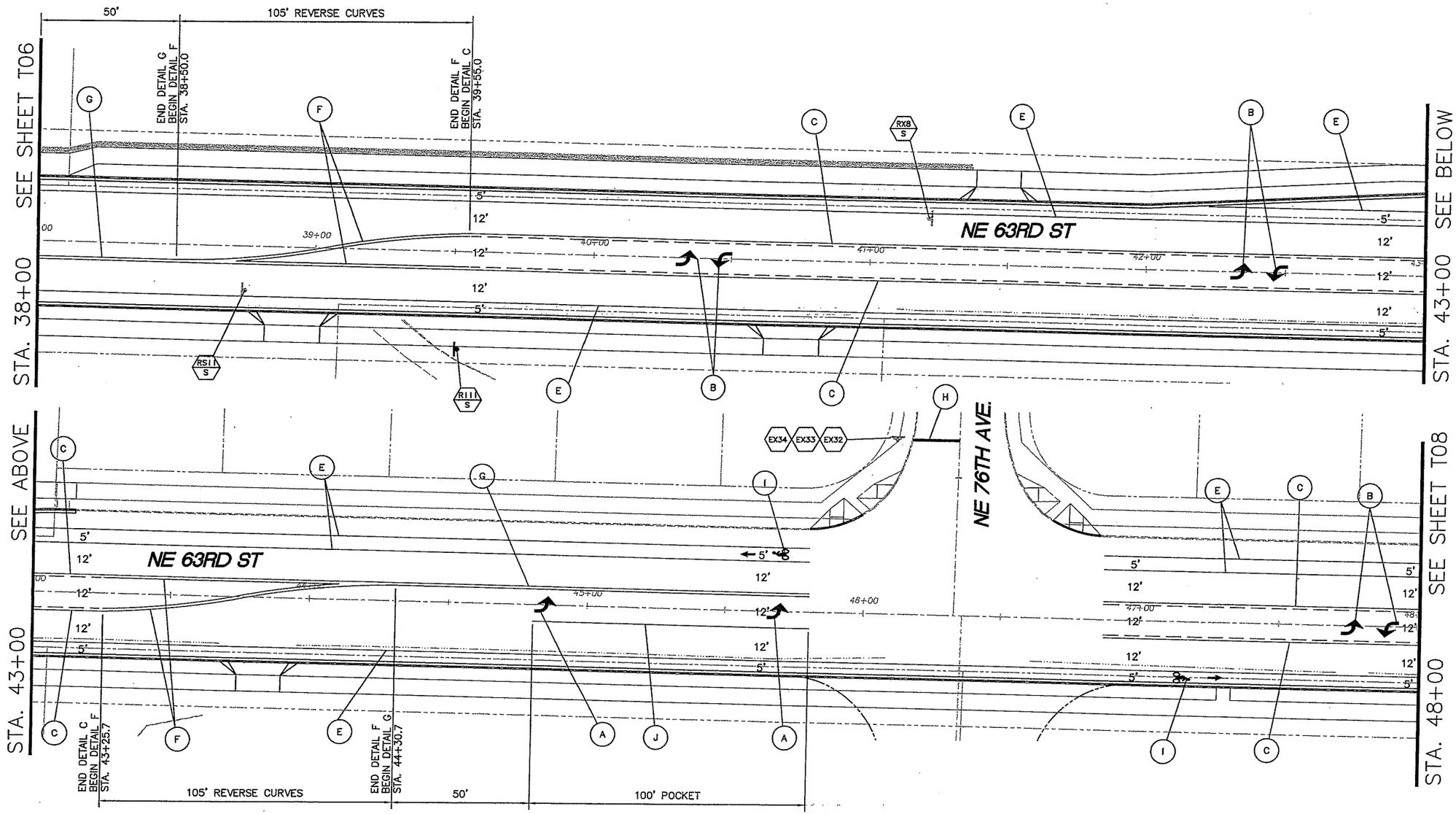

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(S) = Steel
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PERMANENT SIGNING AND STRIPING NOT IN CONTRACT Work to be performed by County Forces

20' 10' 0' 20' 40'
SCALE: 1" = 20'

99% SUBMITTAL
NOT FOR CONSTRUCTION

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

NE 63RD STREET
SIGNING/STRIPING PLAN

DESIGNED:	CTS
DRAWN:	JCLD
CRP:	330422
HORIZ.	
VERT.	
DATE:	03/11/2005
DWG:	T07

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STATE OF WASHINGTON
27233
PROFESSIONAL ENGINEER

DKS Associates
TRANSPORTATION SOLUTIONS
1400 SW Fifth Avenue, Suite 500
Portland, Oregon 97201-5602
Telephone: (503) 243-3500
Fax: (503) 243-1934

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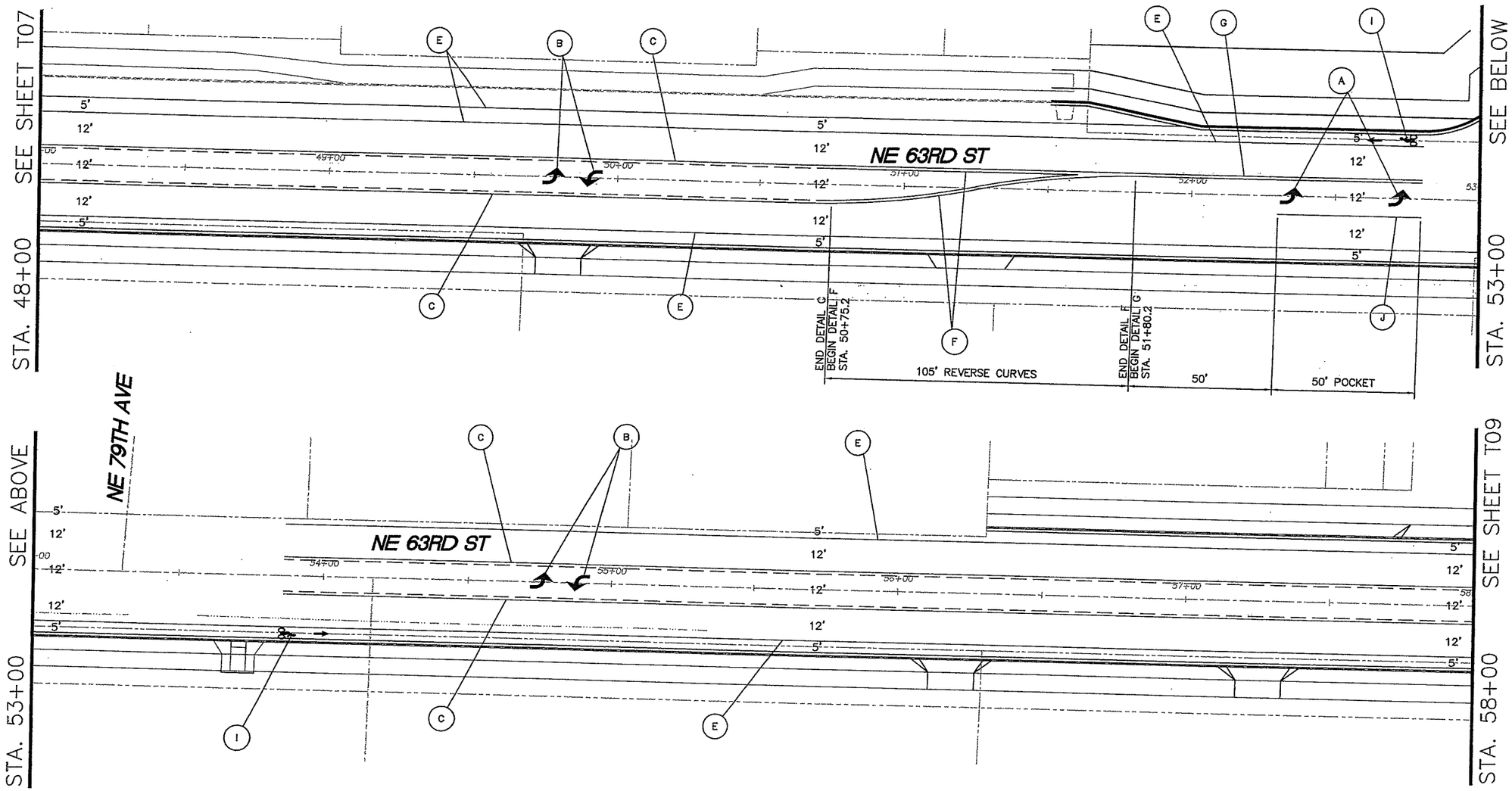
WASHINGTON



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M = Material: (W) = Wood
(S) = Steel
(LP) = Light Pole

PERMANENT SIGNING AND STRIPING NOT IN CONTRACT Work to be performed by County Forces

20' 10' 0' 20' 40'
SCALE: 1" = 20'

99% SUBMITTAL
NOT FOR CONSTRUCTION

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

NE 63RD STREET
SIGNING/STRIPING PLAN

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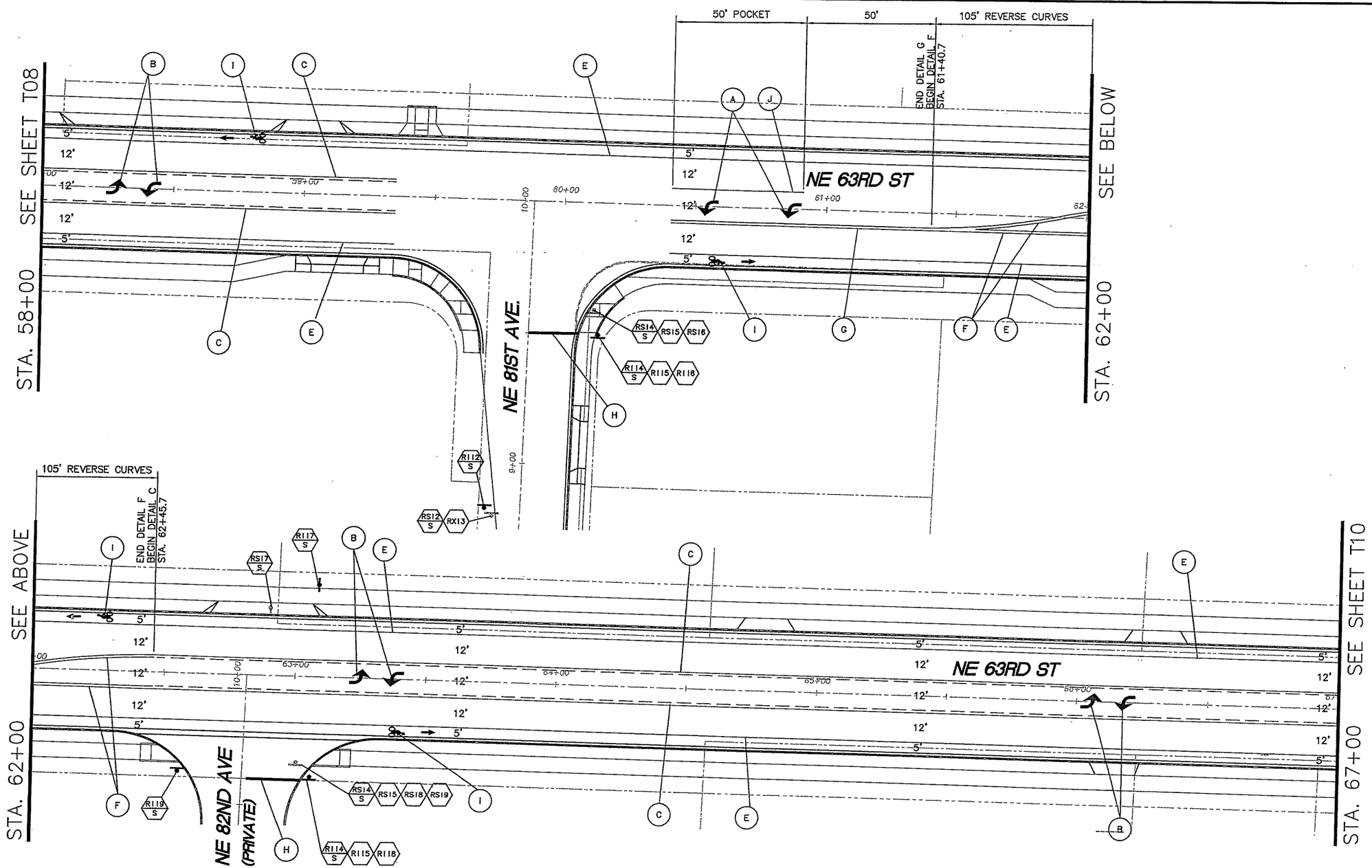
DESIGNED:	CTS
DRAWN:	JCLD
CRP:	330422
HORIZ.	
VERT.	
DATE:	03/11/2005
DWG:	T08



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SHEET LEGEND

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(S) = Steel
(LP) = Light Pole

PERMANENT SIGNING AND STRIPING NOT IN CONTRACT Work to be performed by County Forces

20' 10' 0' 20' 40'
SCALE: 1" = 20'

99% SUBMITTAL
NOT FOR CONSTRUCTION

DESIGNED:	CTS
DRAWN:	JCLD
CRP:	330422
HORIZ.	
VERT.	
DATE:	03/11/2005
DWG:	T09

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PROFESSIONAL ENGINEER

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DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

NE 63RD STREET
SIGNING/STRIPING PLAN

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CLARK COUNTY WASHINGTON

GENERAL NOTES

1. All signing and pavement markings shall conform to the requirements and specifications of the Manual on Uniform Traffic Control Devices (MUTCD), latest edition, and the 2004 WSDOT Standard Specifications for Road, Bridge and Municipal Construction.
2. Dimensions are approximate. All traffic sign positions and pavement markings shall be approved in the field by the engineer prior to installation. For restripe conditions, if dimensions for existing striping vary from those shown on plans, contractor will provide engineer the existing dimensions and gain engineer approval prior to restriping.
3. The striping and pavement marking removal process shall conform to WSDOT "Standard Specifications for Road, Bridge and Municipal Construction" section 8-22.3(6). The County's accepted practice of removal of existing painted pavement marking is by shot blasting. All other markings are removed by grinding. The contractor shall have a written approval by the engineer for any other method of removal.
4. All materials and workmanship shall conform to the 2004 WSDOT Standard Specifications for Road, Bridge and Municipal Construction.
5. Crosswalks, stop bars, and arrows shall be thermoplastic.
6. Refer to signing, striping and pavement marking details on dwgs T13 to T15.
7. Contractor to coordinate with C-Tran two weeks in advance for bus stop sign removal/installation.
8. The contractor shall maintain existing permanent signing in accordance with 2004 WSDOT Standard Specifications for Road, Bridge and Municipal Construction Section 1-07.23(1).
9. The contractor shall provide temporary pavement markings in accordance with WSDOT "Standard Specifications for Road, Bridge and Municipal Construction" section 8.23.

SHEET LEGEND

- (X) Striping detail, see dwg T13 for details.
- (N/M) Install new sign (N) on new sign support (M).
- (RSN/M) Remove and save existing sign (N) and sign support (M).
- (RXN/M) Remove and salvage existing sign (N) and sign support (M).
- (RIN/M) Reinstall existing sign (N) on new/existing sign support (M). See sign schedule for details.
- (EXN) Retain and protect existing sign (N) and support.
- New sign on new steel breakaway sign post.
- Existing sign on existing support.

M = Material: (W) = Wood
(S) = Steel
(LP) = Light Pole

PERMANENT SIGNING AND STRIPING NOT IN CONTRACT Work to be performed by County Forces

20' 10' 0' 20' 40'
SCALE: 1" = 20'

99% SUBMITTAL
NOT FOR CONSTRUCTION

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

NE 63RD STREET
SIGNING/STRIPING PLAN

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DESIGNED:	CTS
DRAWN:	JCLD
CRP:	330422
HORIZ.	
VERT.	
DATE:	03/11/2005
DWG:	T10

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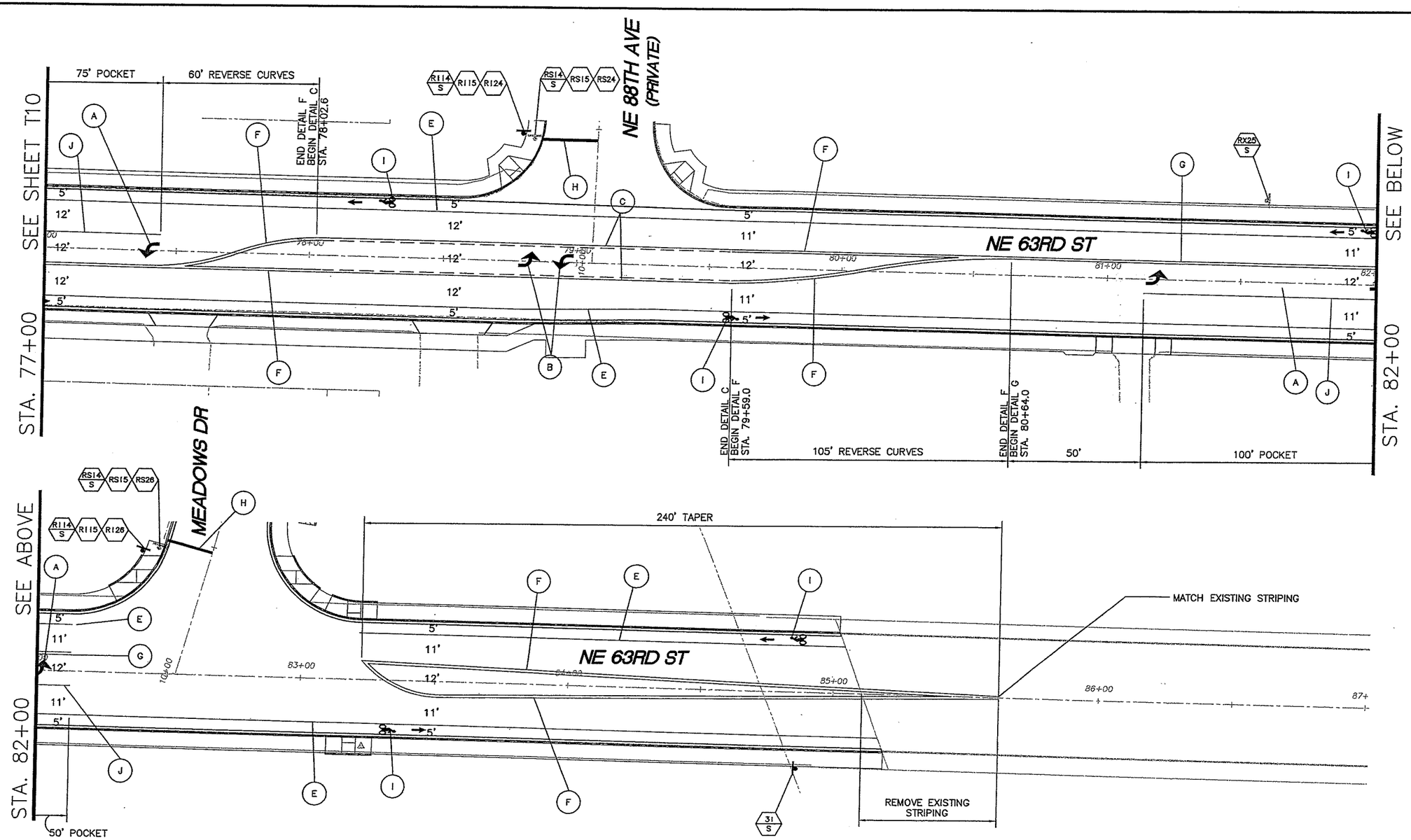

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DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

NE 63RD STREET
SIGNING/STRIPING PLAN

DESIGNED:	CTS
DRAWN:	JCLD
CRP:	330422
HORIZ.	
VERT.	
DATE:	03/11/2005
DWG:	T11

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PRELIMINARY

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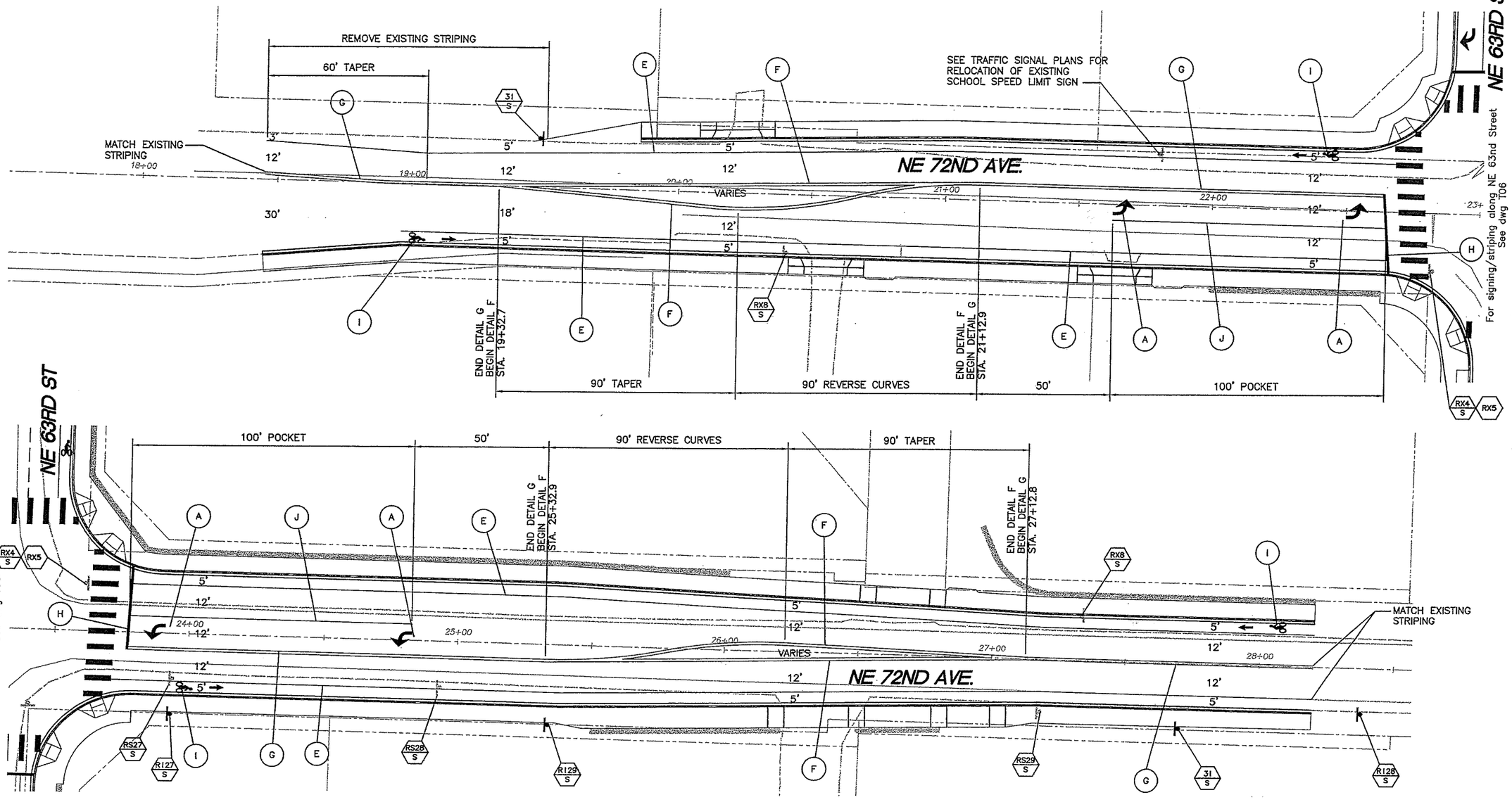

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DESIGN & ENGINEERING DIVISION
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NE 72ND AVENUE
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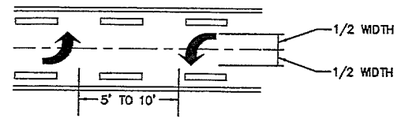
DESIGNED:	CTS
DRAWN:	JCLD
CRP:	330422
HORIZ.	
VERT.	
DATE:	03/11/2005
DWG:	T12

PRELIMINARY

STRIPING LEGEND

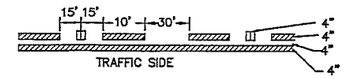
ARROWS SHALL BE TYPE 2L OR 2R (SEE WSDOT STANDARD PLAN H-5c). ARRCWS SHALL BE THERMOPLASTIC PAVEMENT MARKING MATERIAL.

PAVEMENT ARROW MARKINGS (A)
NTS



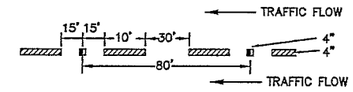
ARROWS SHALL BE TYPE 2L (SEE WSDOT STANDARD PLAN H-5c). ARROWS SHALL BE THERMOPLASTIC PAVEMENT MARKING MATERIAL, CENTERED IN TURN LANE.

TWO WAY LEFT TURN ARROWS (B)
NTS



4" YELLOW LINES (PAINT) WITH TYPE 2YY RPMS AT 80' O.C. OUTSIDE LINE IS SOLID.

TWO WAY LEFT TURN STRIPE (C)
NTS

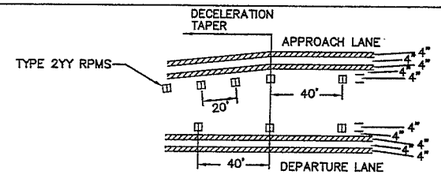


4" WHITE LINE (PAINT) WITH TYPE 2W RPM'S PLACED AT 80' INTERVALS ON TANGENTS AND 40' INTERVALS ON HORIZONTAL CURVES.

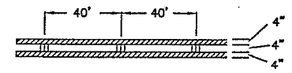
LANE LINE (D)
NTS

8" WHITE LINE (PAINT).

BIKE LANE STRIPE (E)
NTS



DOUBLE YELLOW CENTER STRIPE (F)
NTS

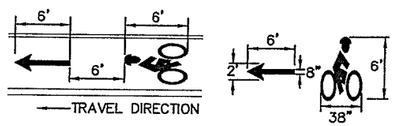


TWO 4"YELLOW LINES (PAINT) WITH 2YY RPMS AT 40' O.C.

ALTERNATE DOUBLE YELLOW CENTER (G)
NTS

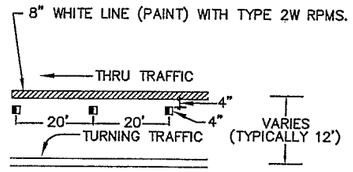
STOPBAR SHALL BE THERMOPLASTIC PAVEMENT MARKING MATERIAL. PLACE STOPBAR 4' FROM EDGE OF LADDER CROSSWALK WHEN APPLICABLE.

STOPBAR (H)
NTS

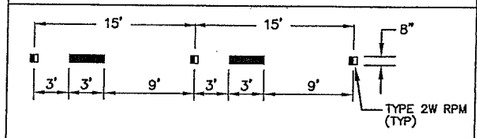


BIKE LANE SYMBOL SHALL BE WHITE THERMOPLASTIC PAVEMENT MARKING MATERIAL

BIKE LANE SYMBOL (I)
NTS

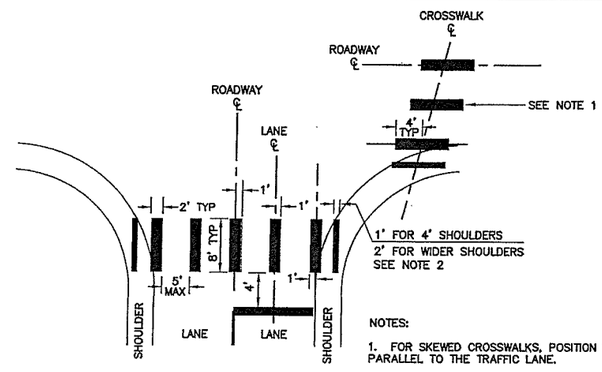


GORE STRIPE (J)
NTS



8" WHITE LINE (PAINT) WITH 2 TYPE 2W PAVEMENT MARKERS SIDE BY SIDE.

DROP LANE LINE (L)
NTS



NOTES:

1. FOR SKEWED CROSSWALKS, POSITION THE LINES PARALLEL TO THE TRAFFIC LANE.
2. INSTALL CROSSWALK LINE IN SHOULDER AREA ONLY WHEN ADJACENT TO SIDEWALK OR SEPARATE WALKWAY.
3. CROSSWALK SHALL BE WHITE THERMOPLASTIC PAVEMENT MARKING MATERIAL.

CROSSWALK (K)
NTS

PERMANENT STRIPING NOT IN CONTRACT
Work to be performed by County Forces

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DESIGNED: CTS
DRAWN: JCLD
CRP: 330422
HORIZ.
VERT.
DATE: 03/11/2005
DWG: T13

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NE 63RD STREET IMPROVEMENTS

STRIPING DETAILS

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CLARK COUNTY WASHINGTON

SIGN SCHEDULE

NO.	CODE	QTY	LEGEND/ DESCRIPTION	SIZE	REMARKS
1		2	PUBLIC ENTRANCE		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
2		2	DO NOT ENTER		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
3		1	NO PARKING		REMOVE AND SALVAGE EXISTING SIGN AND SUPPORT.
4		4	STOP		REMOVE AND SALVAGE EXISTING SIGN AND SUPPORT.
5		4	ALL WAY		REMOVE AND SALVAGE EXISTING SIGN.
6		2	NE 63RD ST		REMOVE AND SALVAGE EXISTING SIGN.
7		2	NE 72ND AV		REMOVE AND SALVAGE EXISTING SIGN.
8		4	STOP AHEAD (SYMBOL)		REMOVE AND SALVAGE EXISTING SIGN AND SUPPORT.
9		2	ENTERING GLENWOOD HILLS		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
10		2	SLOW DOWN!		REINSTALL EXISTING SIGN.
11		2	SPEED LIMIT 35		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
12		1	SPEED LIMIT 25		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
13		1	CALL BEFORE YOU DIG		REMOVE AND SALVAGE EXISTING SIGN.
14		6	STOP		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
15		6	NE 63RD ST		REINSTALL EXISTING SIGN.
16		1	NE 81ST AV		REINSTALL EXISTING SIGN.
17		1	NE 82ND CT PRIVATE ROAD		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
18		1	NE 82ND AV PRIVATE ROAD		REINSTALL EXISTING SIGN.
19		1	DEAD END		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
20		1	NE 84TH PL		REINSTALL EXISTING SIGN.
21		1	SCHOOL BUS STOP AHEAD		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
22		1	SPEED LIMIT 25		RETAIN AND PROTECT EXISTING SIGN AND SUPPORT.
23		1	NE 87TH AV		REINSTALL EXISTING SIGN.
24		1	NE 88TH AV PRIVATE ROAD		REINSTALL EXISTING SIGN.
25		1	ROAD NARROWS		REMOVE AND SALVAGE EXISTING SIGN AND SUPPORT.
26		1	NE MEADOWS DR		REINSTALL EXISTING SIGN.
27		1	END SCHOOL ZONE		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
28		1	PEDESTRIAN (SYMBOL)		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
29		1	SPEED LIMIT 30		REINSTALL EXISTING SIGN ON NEW STEEL SUPPORT.
30	R3-8b	2	"ONLY"	48" x 30"	INSTALL NEW SIGN ON NEW STEEL SUPPORT.
31	R3-16A	3	(BIKE SYMBOL) LANE ENDS	24" x 30"	INSTALL NEW SIGN ON NEW STEEL SUPPORT.
32		1	STOP		RETAIN AND PROTECT EXISTING SIGN AND SUPPORT.
33		1	NE 63RD ST		RETAIN AND PROTECT EXISTING SIGN AND SUPPORT.
34		1	NE 76TH AV		RETAIN AND PROTECT EXISTING SIGN AND SUPPORT.

GENERAL SIGNING NOTES:

1. ALL SIGNING SHALL CONFORM TO WASHINGTON STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS (2004) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

2. ALL POSTS SHALL BE PERFORATED TUBULAR POSTS OR "UNISTRUT'S TELESPAR" POSTS UNLESS OTHERWISE SPECIFIED. SEE NOTES UNDER INSTALLATION DETAIL.

PERMANENT SIGNING NOT IN CONTRACT
Work to be performed by County Forces

99% SUBMITTAL
NOT FOR CONSTRUCTION

DESIGN & ENGINEERING DIVISION
NE 63RD STREET IMPROVEMENTS

SIGN SCHEDULE

DESIGNED: CTS
DRAWN: JCLD
CRP: 330422
HORIZ.
VERT.
DATE: 03/11/2005
DWG: T14

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Portland, Oregon 97201-5602
Telephone: (503) 243-3500
Fax: (503) 243-1934

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CLARK COUNTY
WASHINGTON

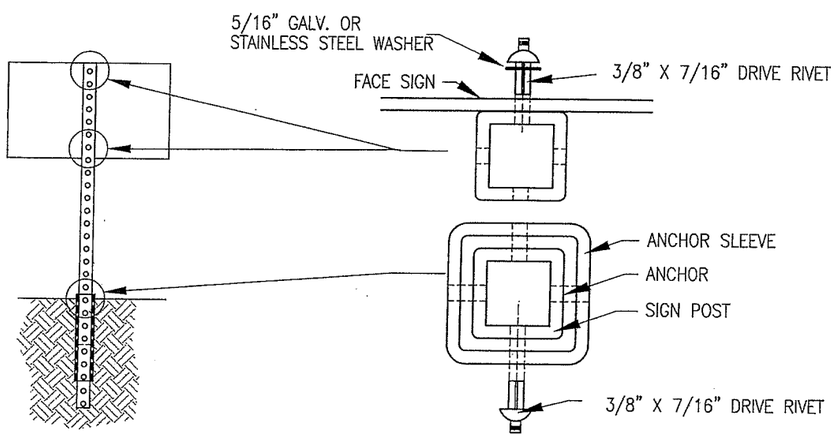
BLOCK:
TITLE-BLOCK.dwg

BIG NAME:
006313.dwg

TSCALE:
.0000

LAST UPDATE:
2:15 pm
wednesday
ab 18 2004

LOT TIME:
1:44 am
tuesday
ab 23 2004



TYPICAL SIGN INSTALLATION

NTS

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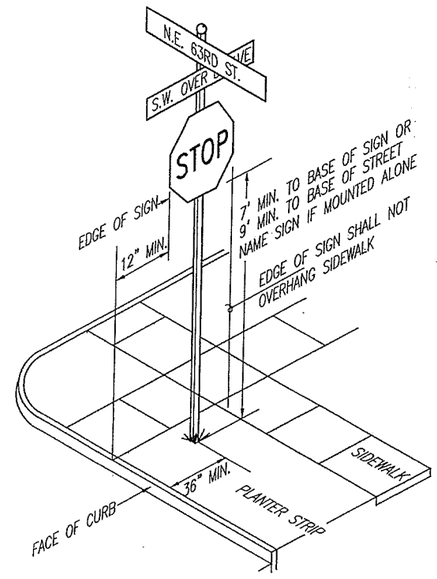
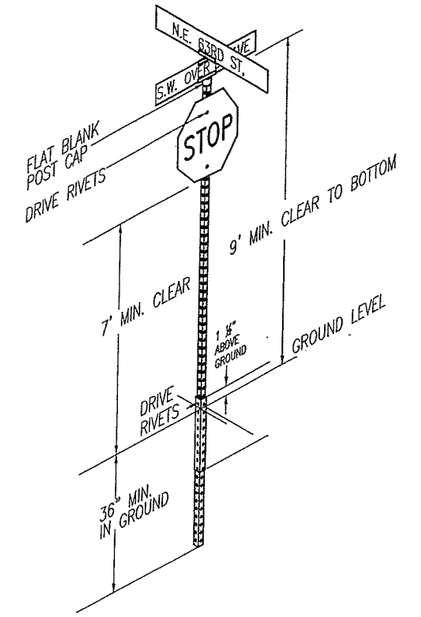
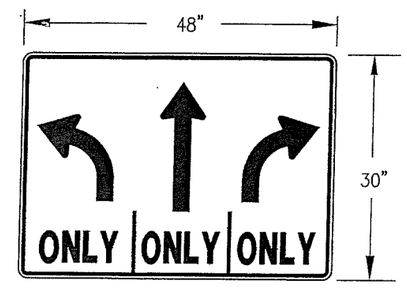




TYPICAL SIGN ASSEMBLY

NTS



R3-8b (MUTCD)

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DESIGNED: CTS
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CRP: 330422
HORIZ.
VERT.
DATE: 03/11/2005
DWG: T15

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PAUL L. COSTELLO
STATE OF WASHINGTON
PROFESSIONAL ENGINEER
EXPIRES: DEC. 31, 2005

DKS Associates
TRANSPORTATION SOLUTIONS
1400 SW Fifth Avenue, Suite 500
Portland, Oregon 97201-5602
Telephone: (503) 243-3500
Fax: (503) 243-1934

DESIGN & ENGINEERING DIVISION
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SIGNING DETAILS

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