

FINAL SITE ENGINEERING PLANS
for
CARDINAL SQUARE
BUILDING "C"
MUNDELEIN, ILLINOIS
PROJECT NO: 7582

OWNER

MUNDELEIN DOWNTOWN PROPERTIES, LLC
300 ANTHONY AVENUE, #205
MUNDELEIN, ILLINOIS 60060

ARCHITECT

ENVIRONS ARCHITECTS / PLANNERS INC.
6201 WEST MAIN STREET, SUITE 150
MARYVILLE, ILLINOIS 62062
PHONE: (618) 344-8699
FAX: (618) 344-8150

CALL J.U.L.I.E. 1-800-892-0123
WITH THE FOLLOWING:

COUNTY LAKE
CITY, TOWNSHIP MUNDELEIN
SEC. & 1/4 SEC. NO. SEC 30, T44N, R11E

48 HOURS BEFORE YOU DIG.
EXCLUDING SAT., SUN. & HOLIDAYS

BENCHMARK

SOURCE BENCHMARK:
VILLAGE OF MUNDELEIN BENCHMARK MUND2
MONUMENT AT SOUTHEAST CORNER OF EAST COURTLAND STREET
AND SOUTH HAMTHORNE BOULEVARD IN PARK AREA.
ELEVATION = 719.488 (NAVD 88)

SITE BENCHMARK:
SOUTHEAST ARROW BOLT ON FIRE HYDRANT AT THE NORTHEAST
CORNER OF MCKINLEY AVENUE AND ANTHONY AVENUE.
ELEVATION = 751.06

NOTE:

VANTAGE POINT ENGINEERING IS TO BE NOTIFIED AT LEAST
THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION
AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS
FIVE (5) DAYS AFTER SEPTEMBER 21ST.

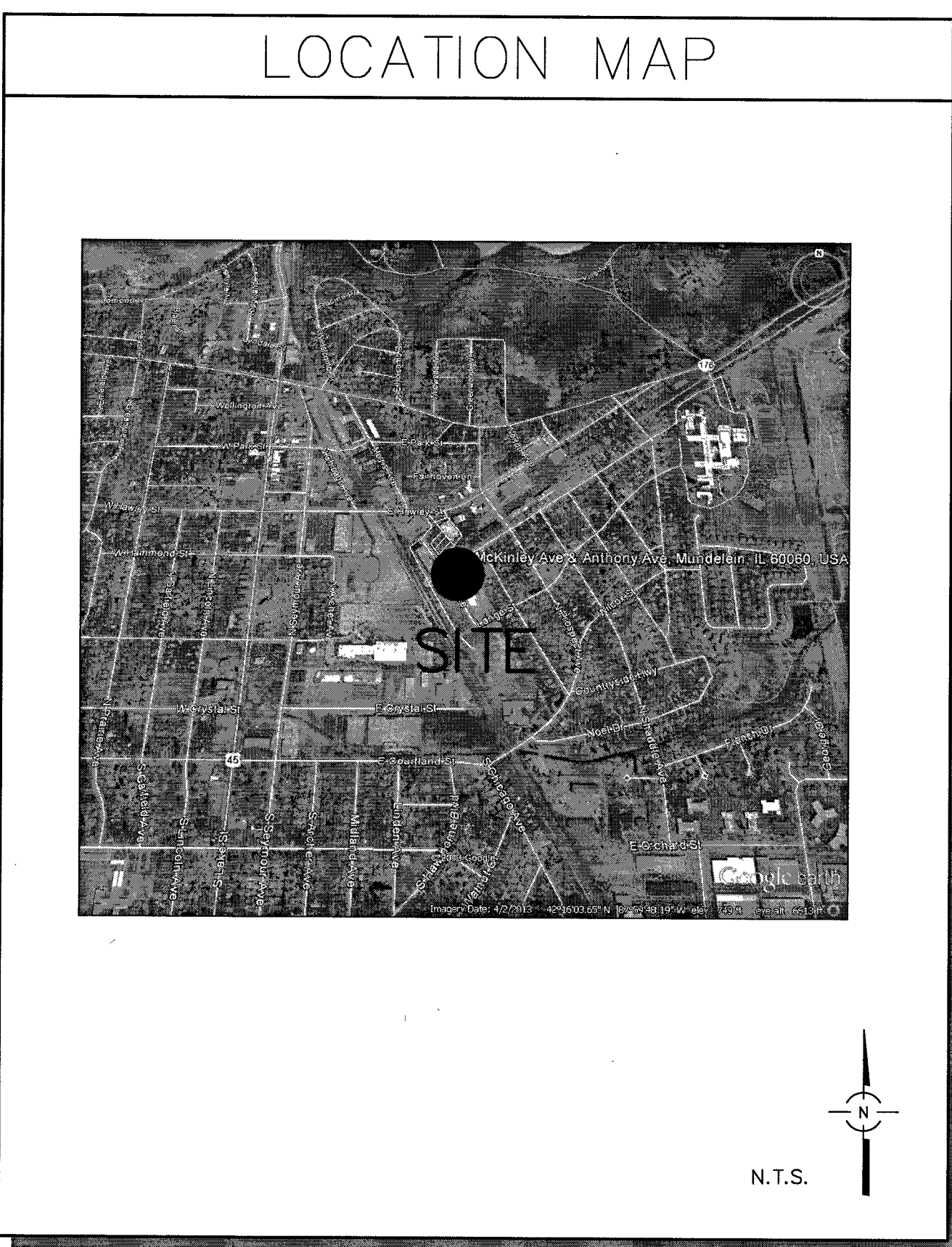
REVISIONS

#	SHEET #	REMARKS	DATE
		ORIGINAL PLAN DATE: JULY 19, 2013	
1	ALL	PER VILLAGE COMMENTS	9/17/13
2	5,6,7,11,18,19	PER VILLAGE COMMENTS	12/10/13
3	5,6,7,9,11,14,17,19	PER VILLAGE COMMENTS	03/03/14
4	7,15-18	PER VILLAGE COMMENTS	04/04/14
5	7,15-18	PER VILLAGE COMMENTS	07/30/14
6	6,7	PER INTERNAL REVIEW	08/22/14
7	6,7	PER INTERNAL REVIEW	10/01/14

INDEX

SHEET #	SHEET I.D.	SHEET DESCRIPTION
1	C1	COVER SHEET
2	TS1	TYPICAL SECTIONS & GENERAL NOTES
3	E1	EXISTING CONDITIONS PLAN
4	E2	TREE SURVEY
5	L1	GEOMETRIC PLAN
6	G1	GRADING PLAN
7	U1	UTILITY PLAN
8	PP1	PLAN AND PROFILE PLAN - SANITARY SEWER
9	PP2	PLAN AND PROFILE PLAN - DeTOMASI DRIVE
10	PP3	PLAN AND PROFILE PLAN - ANTHONY AVENUE
11	X1	SECTIONS
12-13	EC1-EC2	STORMWATER POLLUTION PREVENTION PLANS
14	EC3	SOIL EROSION CONTROL PLAN
15	S1	SPECIFICATIONS
16-17	D1-D2	DETAILS
18	DM	DEMOLITION PLAN
19	OV	OVERALL SITE PLAN
20	LS	LANDSCAPING PLAN

LOCATION MAP



William J. Zalewski 10/01/14
ENGINEER DATE
WILLIAM J. ZALEWSKI, P.E.
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
ILLINOIS REGISTRATION NO.: 062-046121
EXPIRATION DATE: 11/30/2015

THESE PLANS OR ANY PART THEREOF SHALL BE CONSIDERED VOID WITHOUT THE SIGNATURE, SEAL, AND EXPIRATION DATE OF SEAL OF THE ENGINEER

VANTAGE POINT
ENGINEERING
1831 NORTH CREEK DRIVE
SUITE F-6007
THULEY PARK, IL 60077
T: 815.798.9100
I: 815.798.9101
WWW.VPE.COM

CLIENT:
MUNDELEIN DOWNTOWN PROPERTIES, LLC
300 ANTHONY AVENUE, #205
MUNDELEIN, ILLINOIS 60060

PROJECT:
CARDINAL SQUARE
BUILDING "C"
MUNDELEIN, ILLINOIS

PHONE:
FAX:

REVISIONS	
DATE:	10-01-14
SCALE:	
PROJ MGR:	DESIGNED:
BZ	BZ
DRAFTED BY:	CHECKED:
JJS	BZ
SHEET:	OF:
1	20
VPE#	14-76

VANTAGEPOINT ENGINEERING LLC, 2012
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GENERAL NOTES

- 1. REFERENCED CODES
A. ALL PAVEMENT AND STORM SEWER CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (SSBRC)...

- 2. UTILITY LOCATIONS
A. THE UTILITY COMPANIES HAVE BEEN CONTACTED IN REFERENCE TO UTILITIES THEY OWN AND OPERATE WITHIN THE LIMITS FOR THIS PROJECT...

- 3. UTILITY COORDINATION
A. OWNER SHALL OBTAIN EASEMENTS AND PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES...

- 4. NO PLAN SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION" PRIOR TO COMMENCEMENT OF CONSTRUCTION...

- 5. ALL PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS OTHERWISE SPECIFIED.

- 6. UPON AWARDING OF THE CONTRACT, AND WHEN REQUIRED BY THE MUNICIPALITY OR OWNER, THE CONTRACTOR SHALL FURNISH A LABOR MATERIAL TOOLS AND OTHER MISCELLANEOUS ITEMS NOT PRESENT PRIOR TO PROJECT COMMENCEMENT...

- 7. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK...

- 8. CONTRACTOR SHALL VIDEO TAPE WORK AREA PRIOR TO CONSTRUCTION FOR THE PURPOSE OF DOCUMENTING EXISTING CONDITIONS.

- 9. COMMENCING CONSTRUCTION
A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR HIS REPRESENTATIVE AND THE AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION...

- 10. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL TYPES OF TRAFFIC. AT NO TIME SHALL ACCESS BE DENIED TO ADJACENT PROPERTIES.

- 11. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE DEVELOPER'S ENGINEER AT CONTRACTOR'S COST.

- 12. ANY EXISTING SIGNS, LIGHT STANDARDS AND UTILITY POLES WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS OWN EXPENSE...

- 13. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC. SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE...

- 22. GENERAL EXCAVATION/UNDERGROUND NOTES
A. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE EITHER BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL...

- 23. FINAL ACCEPTANCE
A. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT...

- 24. UNDERGROUND NOTES
A. UNDERGROUND WORK SHALL INCLUDE TRENCHING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS...

- 25. IT SHALL BE UNDERSTOOD THAT NEITHER THE MUNICIPALITY, ITS OFFICIALS, CONSULTANTS, NOR ITS EMPLOYEES ARE AGENTS OR REPRESENTATIVES OF THE OWNER, NONE-THE-LESS, THE MUNICIPALITY, ITS OFFICIALS AND EMPLOYEES ARE TO BE PROVIDED SAFE ACCESS TO ALL PHASES OF ALL WORK PERFORMED ON THE PROJECT...

SANITARY SEWER NOTES

- 4. FRAMES AND LIDS:
A. ALL SANITARY SEWER MANHOLE FRAMES AND LIDS SHALL BE NEENAH R-1712 UNLESS OTHERWISE NOTED ON THE PLANS. THE LIDS SHALL HAVE RECESSED (CONCEALED) PICK HOLE AND BE SELF SEALING WITH AN "O" RING GASKET...

STORM SEWER NOTES

- 1. GENERAL:
A. ALL STORM SEWER PIPE SHALL BE RCP, UNLESS OTHERWISE NOTED ON THE PLANS. IN ACCORDANCE WITH THE FOLLOWING: PLAN CODE: MATERIAL RCP: REINFORCED CONCRETE PIPE (ASTM C-76) WITH O-RING GASKETED JOINTS...

SANITARY SEWER NOTES

- 1. GENERAL
A. SANITARY SEWER PIPE SHALL BE PVC (POLYVINYL CHLORIDE) PLASTIC PIPE WITH A STANDARD DIMENSION RATIO (SDR) OF 26 CONFORMING TO ASTM D-3034 WITH PUSH-ON JOINTS CONFORMING TO ASTM D-3212 AND PVC (POLYVINYL CHLORIDE) PLASTIC PIPE, DR18 CONFORMING TO ANNA C-900 WITH PUSH-ON JOINTS...

LEGEND

Table with columns: EXISTING, DESCRIPTION, PROPOSED. Includes symbols for DRAIN TILE, STORM SEWER, SANITARY SEWER, WATER MAIN, etc.

ABBREVIATIONS

Table with columns: M, S, CB, LP, VV, E, FH, GR, I, TF, GF, TC, TD, TW, BW, OP, T/P, B/P, WM, SAN, STM, LO, PLO. Includes abbreviations for manhole, foundation, floor, curb, vault, end section, hydrant, grade ring, invert, foundation, garage floor, curb, depressed curb, retaining wall, bottom of retaining wall, outlet of pipe.

PERMITS

Table with columns: DESCRIPTION, LOG NO., PERMIT NO., DATE ISSUED. Includes entry for VILLAGE OF MUNDELEIN.

CONTACT INFORMATION

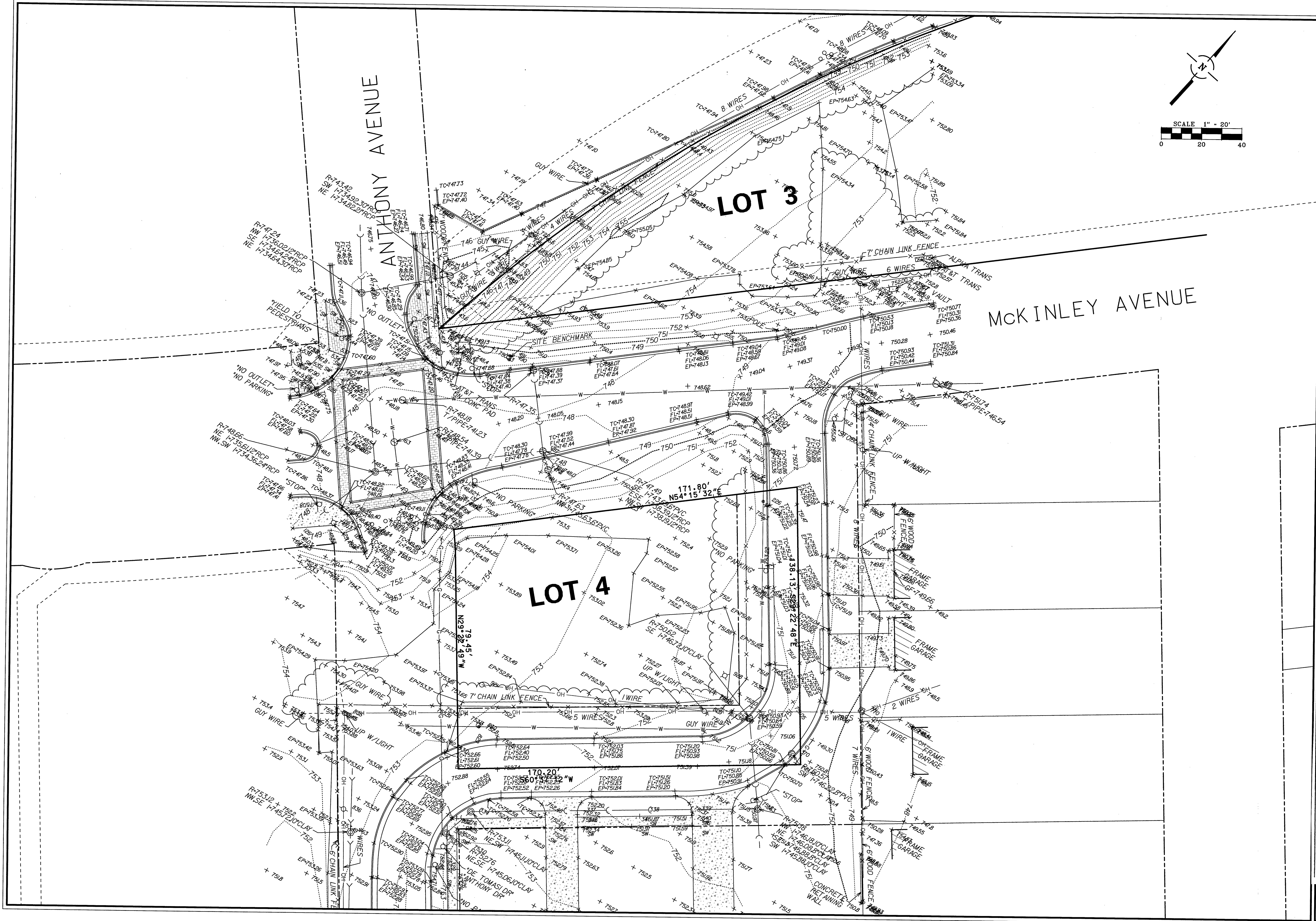
VILLAGE OF MUNDELEIN
3001 GRAND AVE.
440 E CRYSTAL STREET
MUNDELEIN, IL 60060
(847) 949-3270 - (PHONE)
(847) 949-9208 - (FAX)

PEOPLES ENERGY
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ARLINGTON HTS. IL 60004
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COMED
1500 FRANKLIN BLVD.
LIBERTYVILLE, IL 60048
(630) 437-2236
CONTACT PERSON: THOMAS STUTZMAN

Vertical title block containing: TYPICAL SECTIONS AND GENERAL NOTES, CARDINAL SQUARE MUNDELEIN, ILLINOIS, VANTAGEPOINT ENGINEERING, 18311 NORTH CREEK DRIVE, TWINEEY PARK, IL 60477, SHEET 2 OF 20, TS1.



NO.	DATE	REMARKS

NO.	DATE	REMARKS
2	12/10/13	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

EXISTING CONDITIONS
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

VANTAGEPOINT
 ENGINEERING
13311 NORTH CREEK DRIVE
 TIMON PARK, IL 60477
 TEL: 708.478.4004
 INFO@VPENG.COM

TREE INVENTORY LISTING
SPACECO, INC. - ANTHONY AVENUE SITE
MUNDELEIN, ILLINOIS
(CBBEL PROJECT NUMBER 130439)

NOTE: VALUES ASSIGNED FOR CONDITION AND FORM ARE SHOWN IN RIGHT COLUMN
BELOW. RATINGS ARE BASED ON GENERAL OBSERVATIONS AND ON A SCALE OF
1 (EXCELLENT) TO 5 (POOR)

INVENTORY COMPLETED ON SEPTEMBER 6, 2013.

Tag #	Species	Common Name	Size (inches)	Condition	Form	Comments
1	Populus deltoides	Cottonwood	4	3	4	
2	Populus deltoides	Cottonwood	3	3	4	
3	Salix nigra	Black willow	3	3	3	
4	Salix nigra	Black willow	3,3,4,4	3	4	
5	Salix nigra	Black willow	3	3	4	
6	Salix nigra	Black willow	4,4	3	4	
7	Salix nigra	Black willow	3	3	3	
8	Salix nigra	Black willow	3	3	3	
9	Salix nigra	Black willow	3	3	5	Lean
10	Salix nigra	Black willow	3	3	4	
11	Populus deltoides	Cottonwood	3,3	3	4	
12	Populus deltoides	Cottonwood	3,3	3	3	
13	Populus deltoides	Cottonwood	3	3	3	
14	Populus deltoides	Cottonwood	3	3	3	
15	Populus deltoides	Cottonwood	4	3	3	
16	Populus deltoides	Cottonwood	3	3	3	
17	Acer negundo	Box elder	3	3	3	
18	Populus tremuloides	Quaking aspen	3	3	3	
19	Ulmus pumila	Siberian elm	3	3	3	
20	Ulmus pumila	Siberian elm	3	3	3	
21	Ulmus pumila	Siberian elm	5	3	4	
22	Populus deltoides	Cottonwood	3,3	3	4	
23	Morus alba	White mulberry	3,4	3	4	
24	Morus alba	White mulberry	3,3	3	3	
25	Ulmus pumila	Siberian elm	3	3	3	
26	Ulmus pumila	Siberian elm	3	3	3	
27	Ulmus pumila	Siberian elm	3	3	3	
28	Prunus serotina	Black cherry	5	3	3	
29	Morus alba	White mulberry	4	3	3	
30	Rhamnus cathartica	Buckthorn	3	3	4	
31	Rhamnus cathartica	Buckthorn	3	3	4	
32	Rhamnus cathartica	Buckthorn	6,3,3	3	4	
33	Rhamnus cathartica	Buckthorn	4	3	4	
34	Ulmus pumila	Siberian elm	6	3	3	
35	Ulmus pumila	Siberian elm	7	3	3	
36	Rhamnus cathartica	Buckthorn	3	3	3	
37	Ulmus pumila	Siberian elm	3,3	3	4	
38	Rhamnus cathartica	Buckthorn	3,3,3,4	3	4	
39	Morus alba	White mulberry	3	3	4	
40	Ulmus pumila	Siberian elm	11	3	3	
41	Rhamnus cathartica	Buckthorn	4,3	3	4	
42	Ailanthus altissima	Tree of heaven	4	3	3	
43	Rhamnus cathartica	Buckthorn	4	3	3	
44	Morus alba	White mulberry	3	3	3	
45	Rhamnus cathartica	Buckthorn	5,3,3	3	4	
46	Ulmus pumila	Siberian elm	6,7	3	3	
47	Rhamnus cathartica	Buckthorn	5	3	4	
48	Gleditsia triacanthos	Honeylocust	7,6,6,4	3	3	
49	Rhamnus cathartica	Buckthorn	4,4	3	4	
50	Rhamnus cathartica	Buckthorn	4,4	3	4	
51	Acer negundo	Box elder	7	3	4	
52	Acer negundo	Box elder	7	3	4	
53	Rhamnus cathartica	Buckthorn	7,4	3	4	
54	Rhamnus cathartica	Buckthorn	3	3	4	
55	Acer negundo	Box elder	5,6	3	4	
56	Acer negundo	Box elder	6,6	3	4	
57	Rhamnus cathartica	Buckthorn	3,3,3,3	3	4	
58	Morus alba	White mulberry	5	3	4	
59	Rhamnus cathartica	Buckthorn	3,3	3	4	
60	Malus pumila	Crabapple	3	3	3	
61	Juglans nigra	Black walnut	3	3	3	
62	Acer negundo	Box elder	3,3	3	4	
63	Rhamnus cathartica	Buckthorn	3,3,3	3	4	
64	Ulmus pumila	Siberian elm	3,3	3	4	
65	Juglans nigra	Black walnut	4	3	3	
66	Rhamnus cathartica	Buckthorn	3	3	3	
67	Ulmus pumila	Siberian elm	3,3	3	3	
68	Ulmus americana	American elm	3	3	3	
69	Malus pumila	Crabapple	3,3	3	3	
70	Rhamnus cathartica	Buckthorn	3,3	3	4	
71	Juniperus virginiana	Red cedar	4	3	3	
72	Rhamnus cathartica	Buckthorn	3,3	3	4	
73	Rhamnus cathartica	Buckthorn	3,3	3	4	
74	Ulmus pumila	Siberian elm	3	3	3	
75	Juglans nigra	Black walnut	4	3	3	
76	Acer negundo	Box elder	3	3	3	
77	Fraxinus pennsylvanica	Green ash	4	3	3	
78	Rhamnus cathartica	Buckthorn	3,3	3	4	
79	Malus pumila	Crabapple	3	3	3	
80	Morus alba	White mulberry	3	3	3	
81	Malus pumila	Crabapple	4	3	3	
82	Juglans nigra	Black walnut	3	3	3	
83	Morus alba	White mulberry	3	3	3	
84	Gleditsia triacanthos	Honeylocust	6	2	2	
85	Ulmus pumila	Siberian elm	3	3	3	
86	Morus alba	White mulberry	4	3	3	
87	Acer platanoides	Norway maple	4,3	3	3	
88	Acer platanoides	Norway maple	4	3	3	
89	Ulmus pumila	Siberian elm	3	3	3	
90	Acer platanoides	Norway maple	21	2	2	
91	Acer platanoides	Norway maple	24	2	2	
92	Acer platanoides	Norway maple	22	2	2	
93	Morus alba	White mulberry	3	3	3	
94	Morus alba	White mulberry	3	3	3	
95	Morus alba	White mulberry	4	3	3	
96	Ulmus pumila	Siberian elm	20	5	5	Deadwood
97	Populus deltoides	Cottonwood	33	3	3	
98	Juglans nigra	Black walnut	3	3	3	
99	Ulmus pumila	Siberian elm	3,3	3	3	
100	Malus pumila	Crabapple	3	3	3	
101	Ulmus pumila	Siberian elm	3,3	3	4	



NOTE: AERIAL PHOTOGRAPH TAKEN IN OCTOBER, 2011

CB CHRISTOPHER B. BURKE
ENGINEERING LTD.
8575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(617) 623-6000

NO.	DATE	REMARKS

NO.	DATE	PER VILLAGE COMMENTS	REMARKS
1	9/17/13		

TREE SURVEY
CARDINAL SQUARE
MUNDELEIN, ILLINOIS

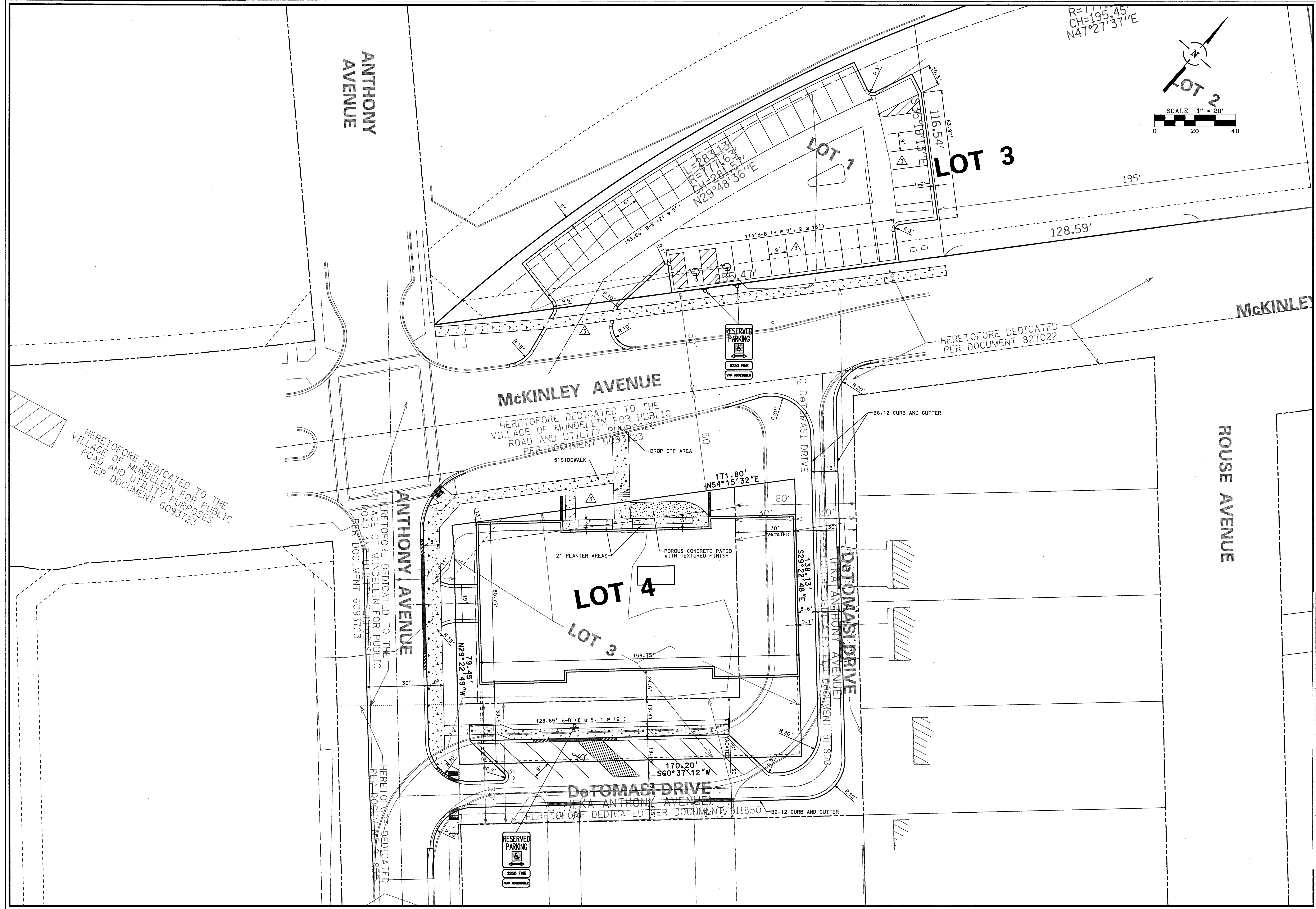
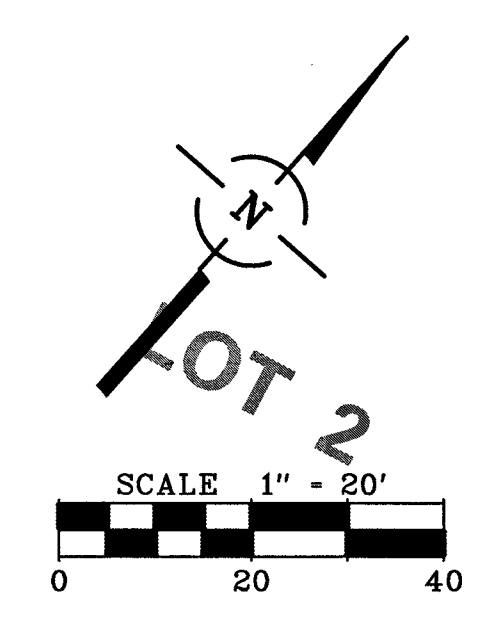
VANTAGE POINT
ENGINEERING

1831 NORTH CREEK DRIVE
SUITE F
TINLET PARK, IL 60477

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FOR US: 630-308-8888
INFO@VPENGS.COM

R=111.45'
 CH=195.45'
 N47°27'37"E

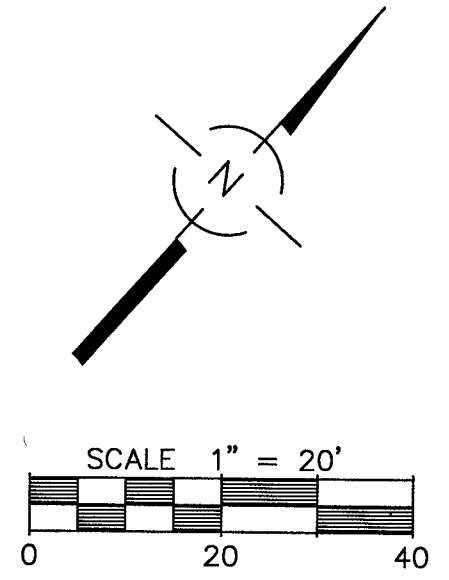
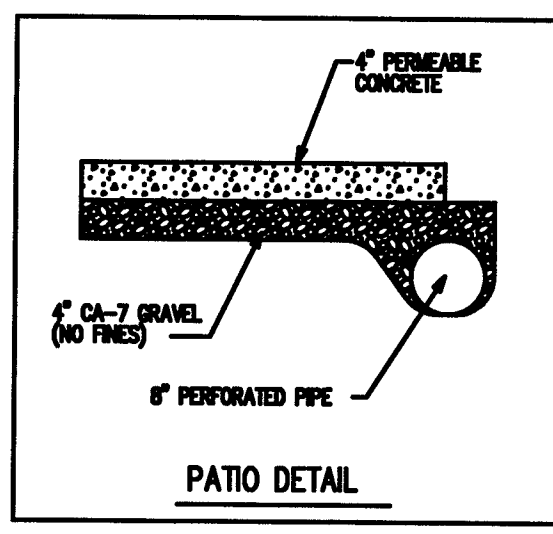
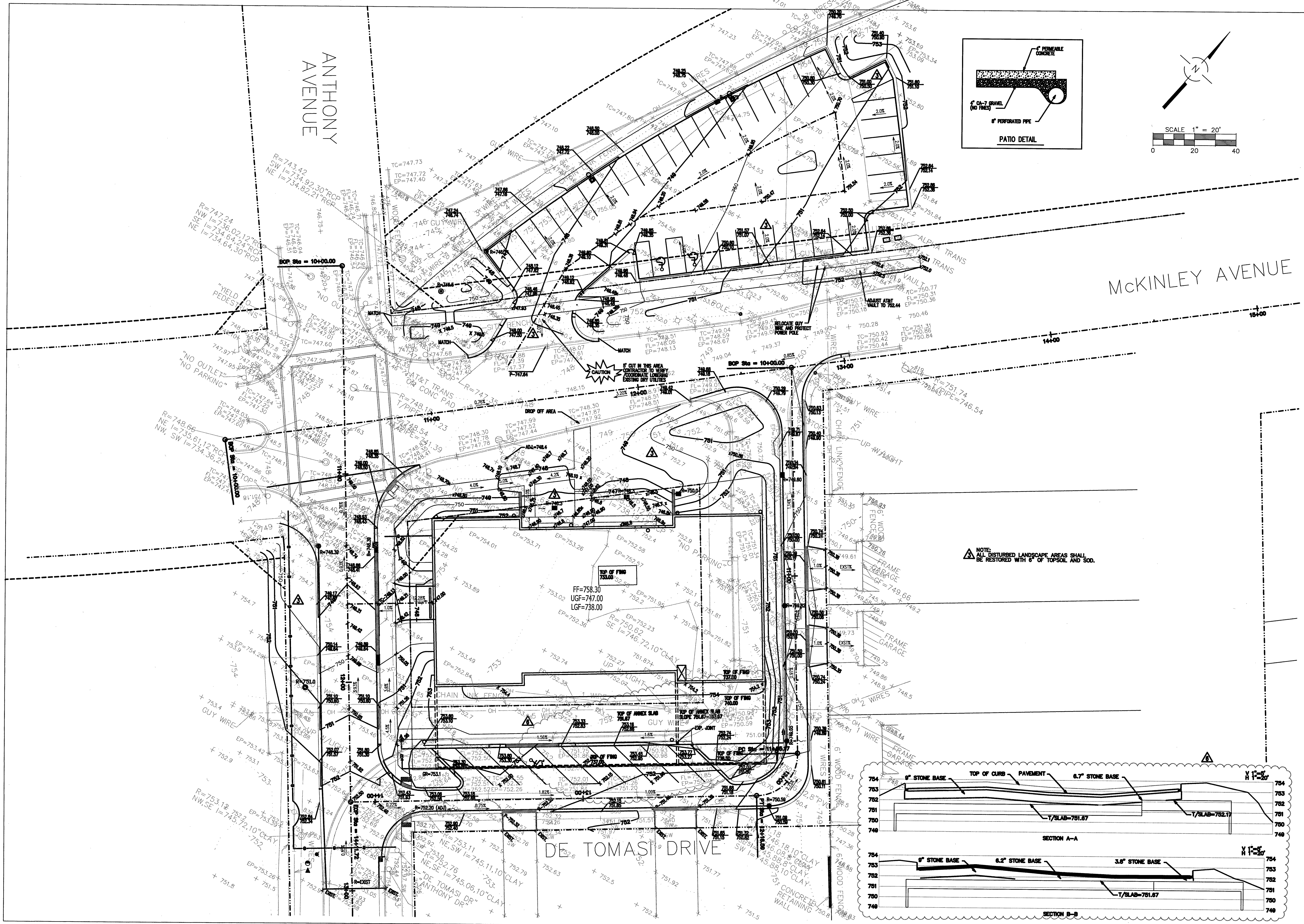


NO.	DATE	REMARKS
3	03/03/14	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

NO.	DATE	REMARKS
3	03/03/14	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

GEOMETRIC PLAN
 CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

VANTAGE POINT
 ENGINEERING
 1708 W. WISCONSIN DRIVE
 SUITE 100
 TILNEY PARK, IL 60477
 VPENG.COM | CIVIL ENGINEERING | LAND PLANNING | SURVEYING



VANTAGEPOINT ENGINEERING
 18311 NORTH WISBECK DRIVE
 SUITE 100
 TINLEY PARK, IL 60477
 TEL: 708.478.4004
 INFO@VPENG.COM

CLIENT: MUNDELEIN DOWNTOWN PROPERTIES, LLC
 300 ANTHONY AVENUE, #205
 MUNDELEIN, ILLINOIS 60060

CARDINAL SQUARE BUILDING "C"

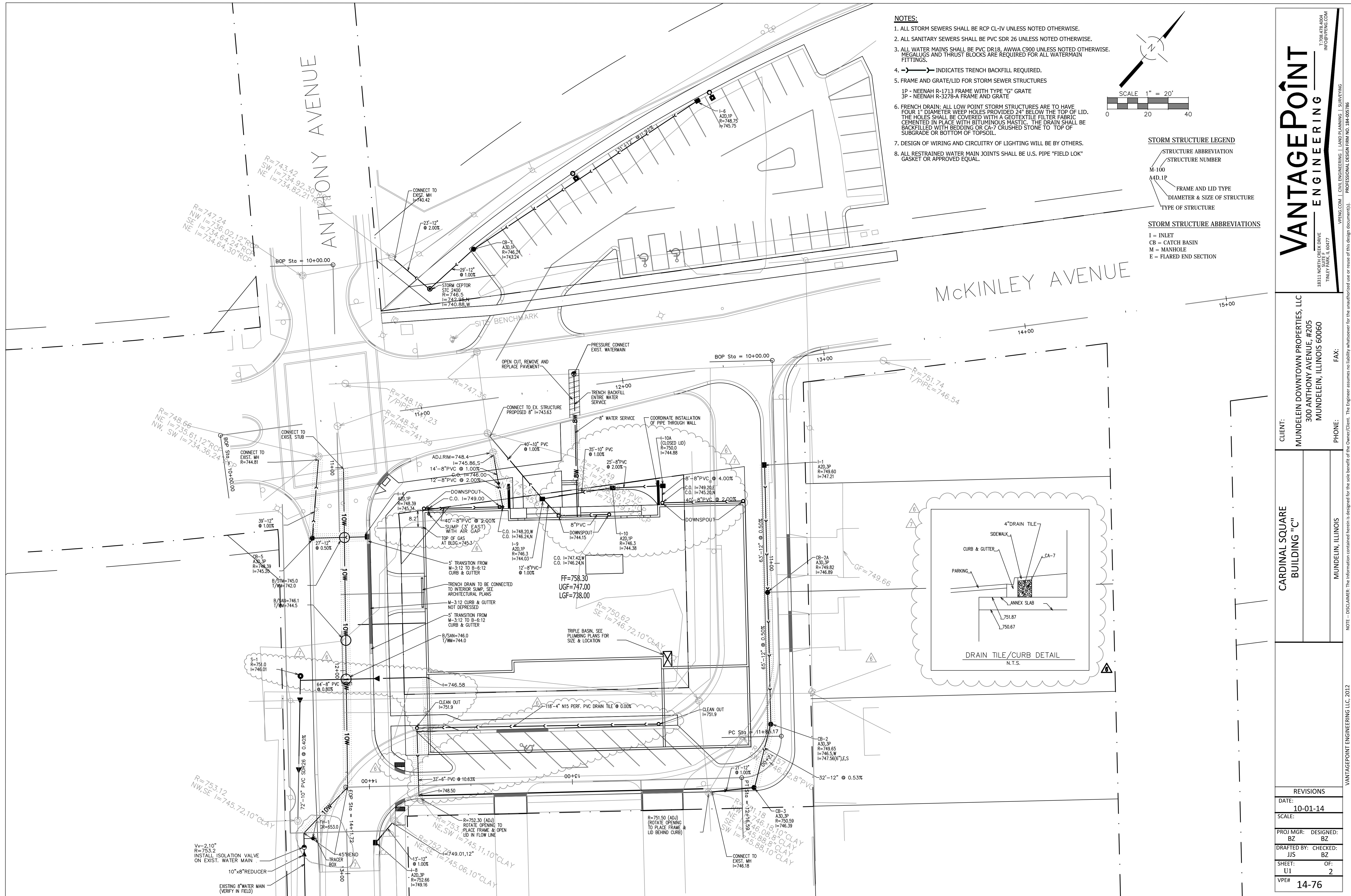
MUNDELEIN, ILLINOIS

PHONE: FAX:

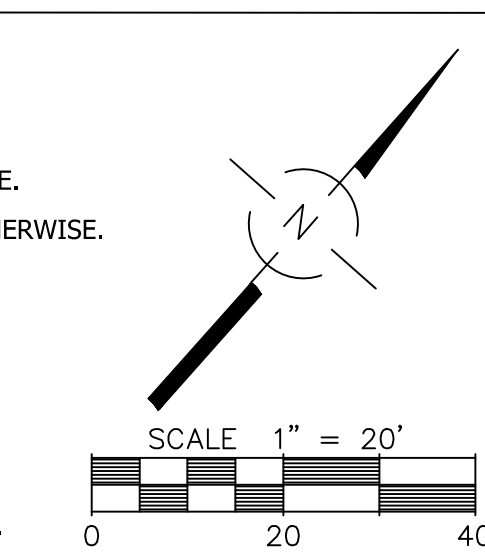
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VANTAGEPOINT ENGINEERING LLC, 2012

REVISIONS	
DATE:	10-01-14
SCALE:	
PROJ MGR:	DESIGNED: BZ
	BY: BZ
DRAFTED BY:	CHECKED: BZ
	BY: BZ
SHEET:	OF:
VPEN	14-76



- NOTES:**
1. ALL STORM SEWERS SHALL BE RCP CL-IV UNLESS NOTED OTHERWISE.
 2. ALL SANITARY SEWERS SHALL BE PVC SDR 26 UNLESS NOTED OTHERWISE.
 3. ALL WATER MAINS SHALL BE PVC DR18, AWWA C900 UNLESS NOTED OTHERWISE. MEGALUGS AND THRUST BLOCKS ARE REQUIRED FOR ALL WATERMAIN FITTINGS.
 4. → → → INDICATES TRENCH BACKFILL REQUIRED.
 5. FRAME AND GRATE/LID FOR STORM SEWER STRUCTURES
 1P - NEENAH R-1713 FRAME WITH TYPE "G" GRATE
 3P - NEENAH R-3278-A FRAME AND GRATE
 6. FRENCH DRAIN: ALL LOW POINT STORM STRUCTURES ARE TO HAVE FOUR 1" DIAMETER WEEP HOLES PROVIDED 24" BELOW THE TOP OF LID. THE HOLES SHALL BE COVERED WITH A GEOTEXTILE FILTER FABRIC CEMENTED IN PLACE WITH BITUMINOUS MASTIC. THE DRAIN SHALL BE BACKFILLED WITH BEDDING OR CA-7 CRUSHED STONE TO TOP OF SUBGRADE OR BOTTOM OF TOPSOIL.
 7. DESIGN OF WIRING AND CIRCUITRY OF LIGHTING WILL BE BY OTHERS.
 8. ALL RESTRAINED WATER MAIN JOINTS SHALL BE U.S. PIPE "FIELD LOK" GASKET OR APPROVED EQUAL.



- STORM STRUCTURE LEGEND**
- STRUCTURE ABBREVIATION
 - STRUCTURE NUMBER
 - M-100
 - A4D.1P
 - FRAME AND LID TYPE
 - DIAMETER & SIZE OF STRUCTURE
 - TYPE OF STRUCTURE
- STORM STRUCTURE ABBREVIATIONS**
- I = INLET
 - CB = CATCH BASIN
 - M = MANHOLE
 - E = FLARED END SECTION

VANTAGEPOINT ENGINEERING

1788 478 4004
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18311 NORTH WISCONSIN DRIVE
 SUITE 100
 TIMLEY PARK, IL 60477

VPENC.COM | CIVIL ENGINEERING | LAND PLANNING | SURVEYING
 PROFESSIONAL DESIGN FIRM NO. 184-05786

CLIENT:
MUNDELEIN DOWNTOWN PROPERTIES, LLC
 300 ANTHONY AVENUE, #205
 MUNDELEIN, ILLINOIS 60060

PHONE:
 (708) 478-4004

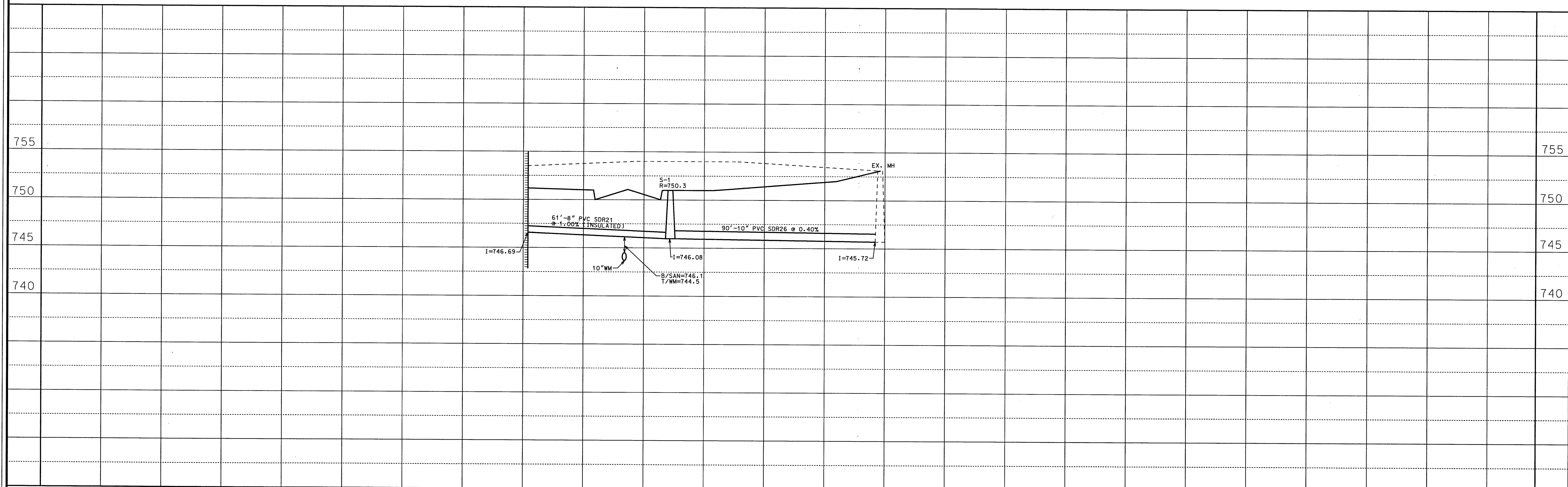
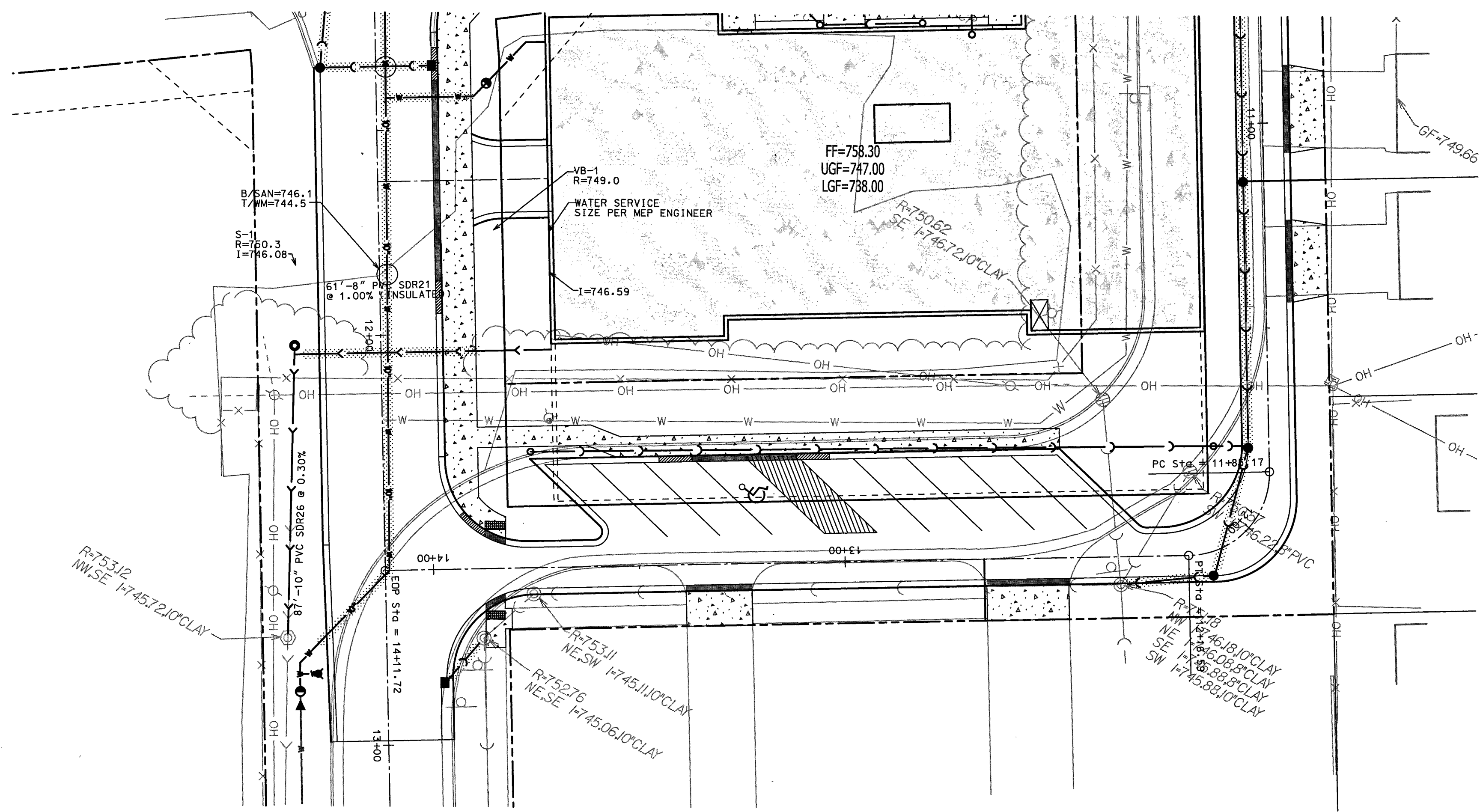
FAX:
 (708) 478-4004

CARDINAL SQUARE BUILDING "C"

MUNDELEIN, ILLINOIS

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REVISIONS	
DATE:	10-01-14
SCALE:	
PROJ MGR:	DESIGNED: BZ
	BZ
DRAFTED BY:	CHECKED: JJS
	BZ
SHEET:	OF:
U1	2
VPE#	14-76



NO.	DATE	REMARKS

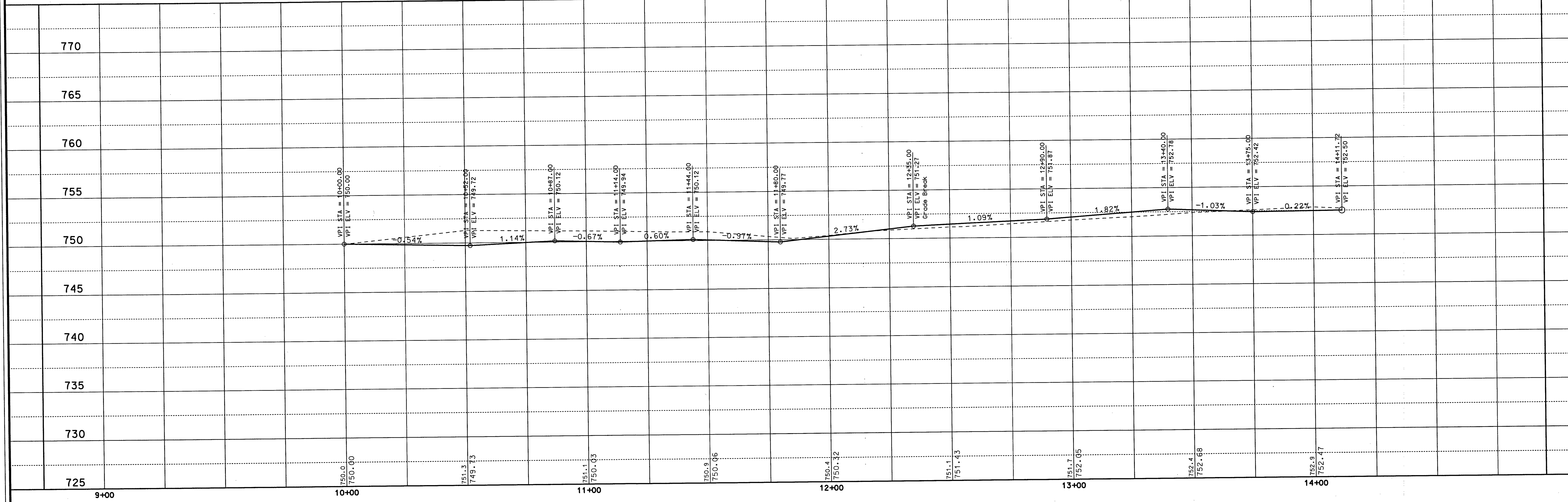
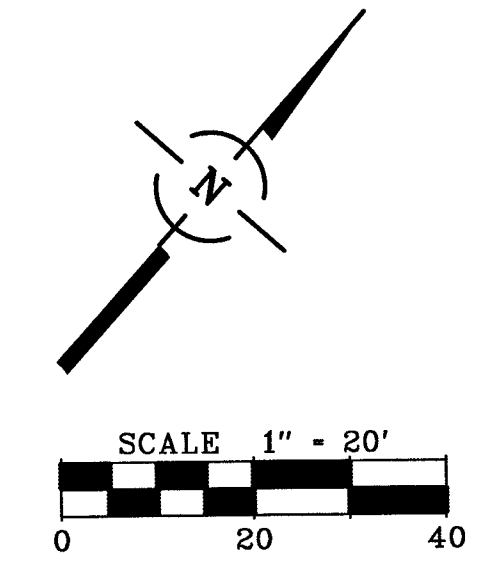
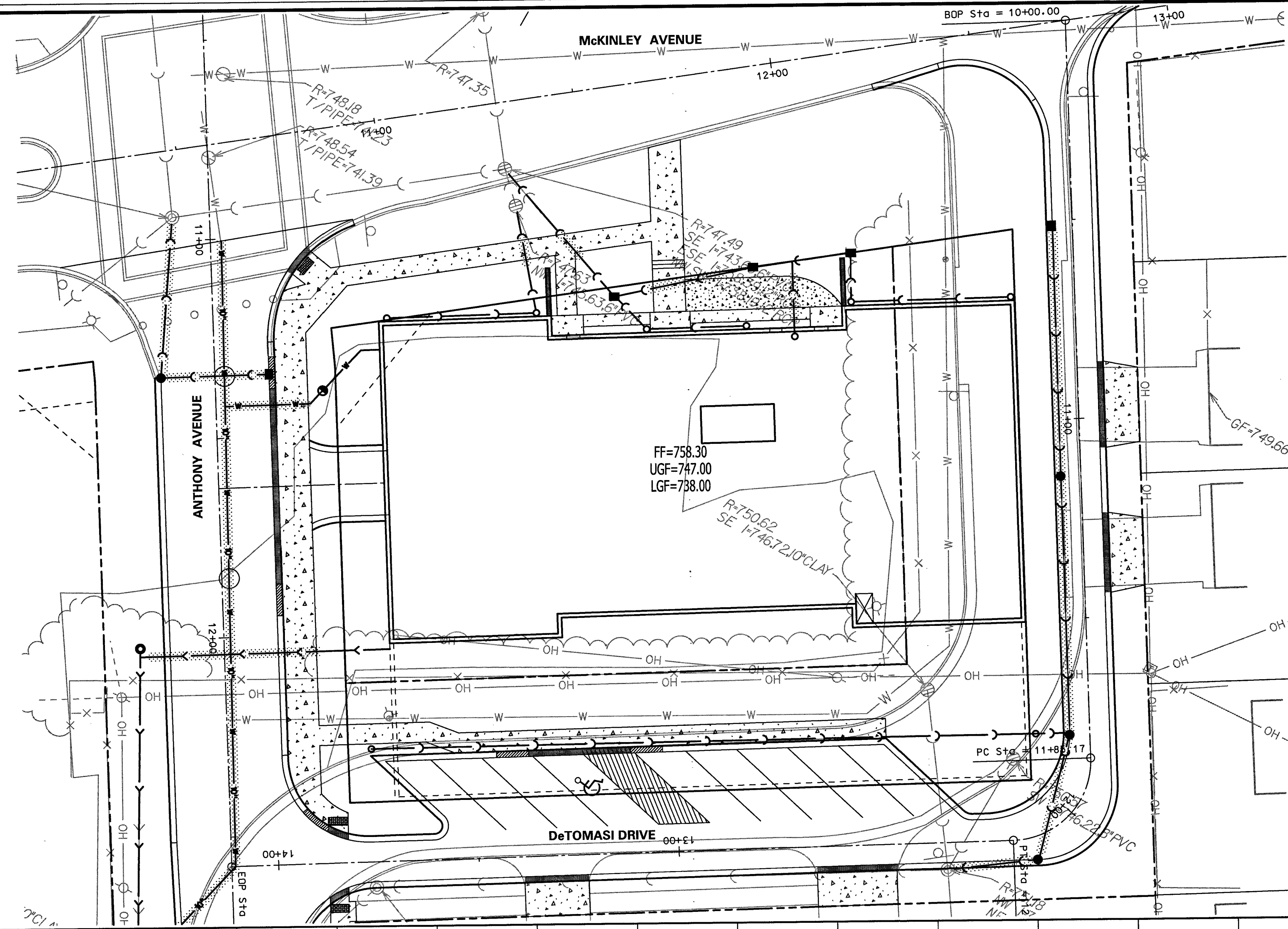
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SANITARY PLAN AND PROFILE
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

VANTAGEPOINT
 ENGINEERING

18311 NORTH CREEK DRIVE
 TINLEY PARK, IL 60477
 708.478.4004
 INFO@VPENG.COM

VPENG.COM | CIVIL ENGINEERING | LAND PLANNING | SURVEYING



PLAN AND PROFILE - DeTOMASI DRIVE
CARDINAL SQUARE
MUNDELEIN, ILLINOIS

NO. DATE REMARKS

3 03/03/14 PER VILLAGE COMMENTS

1 9/17/13 PER VILLAGE COMMENTS

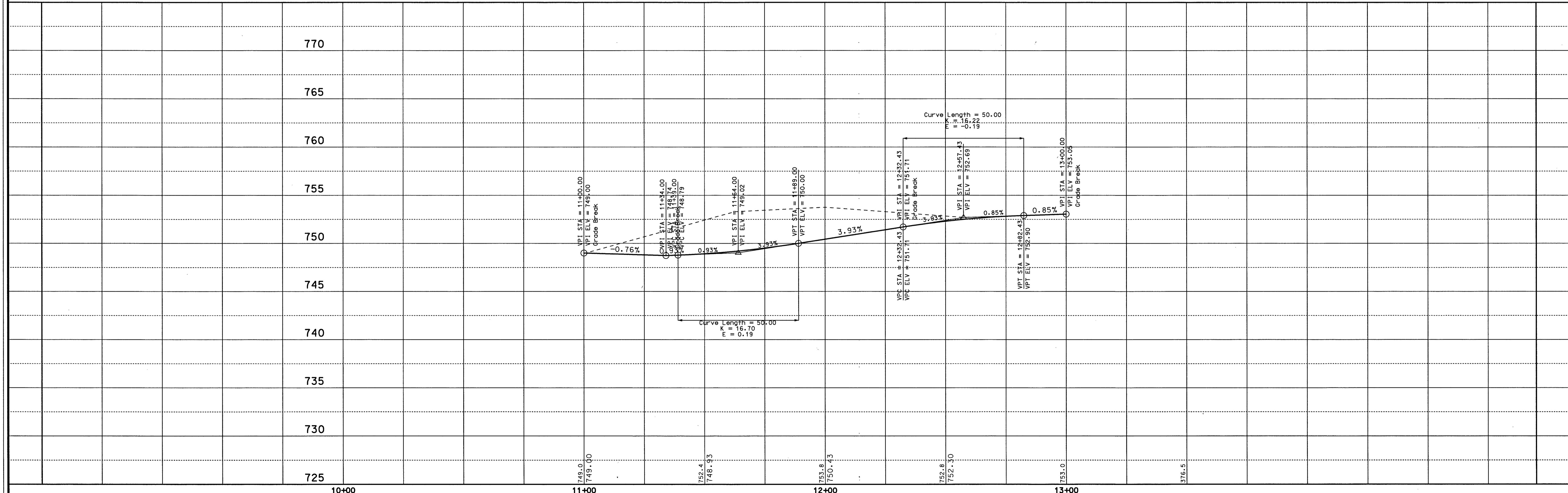
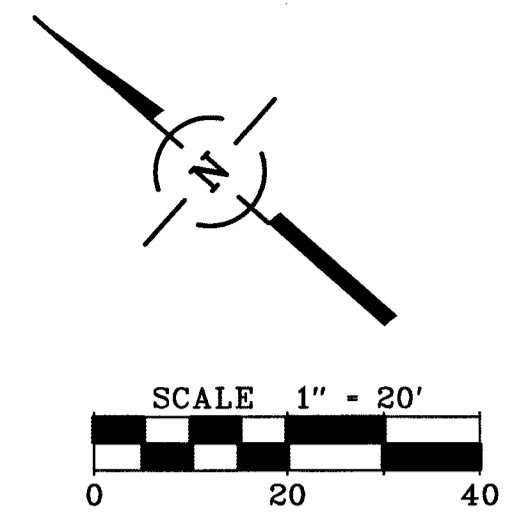
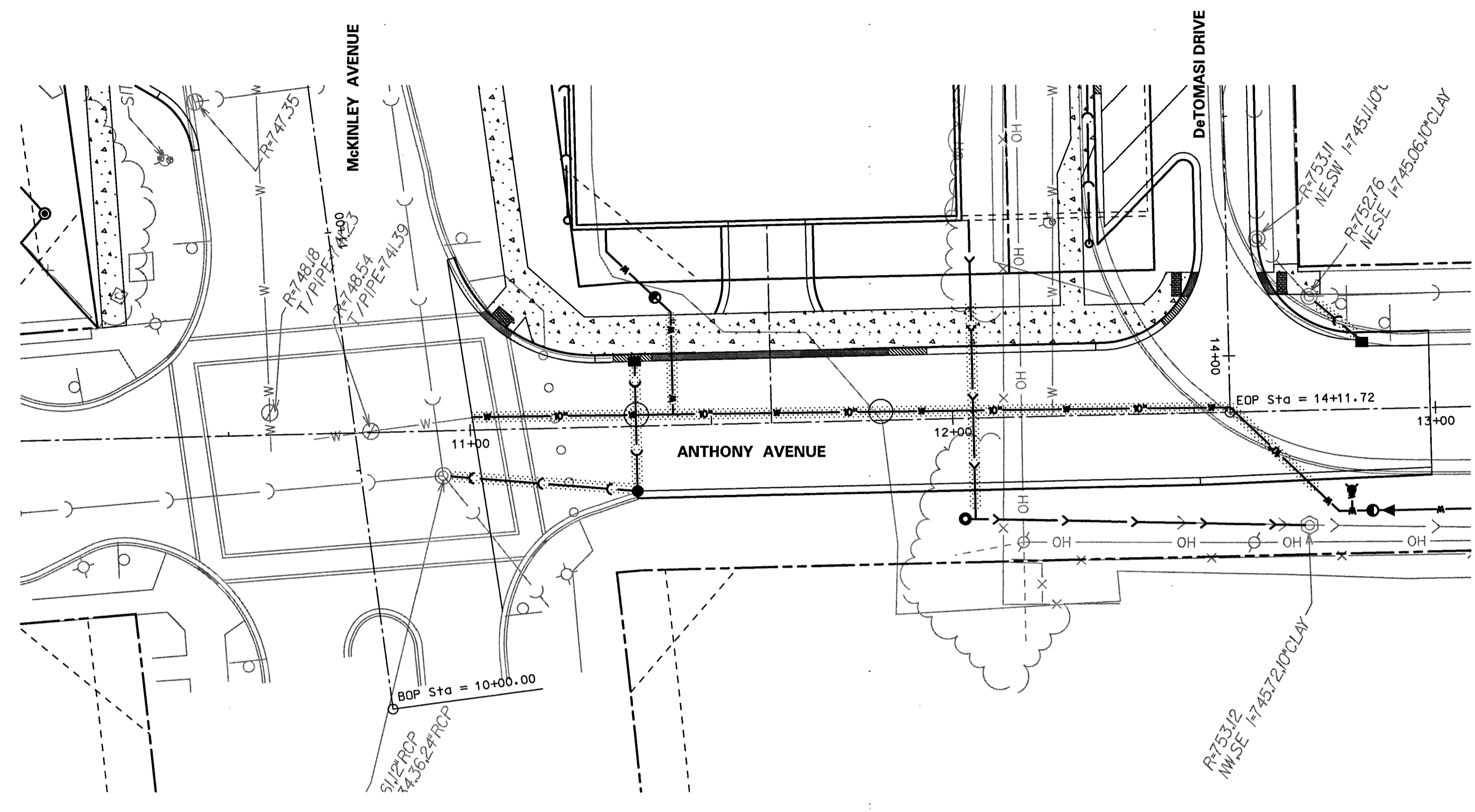
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SHEET
PP2
9 OF 20



NO.	DATE	REMARKS

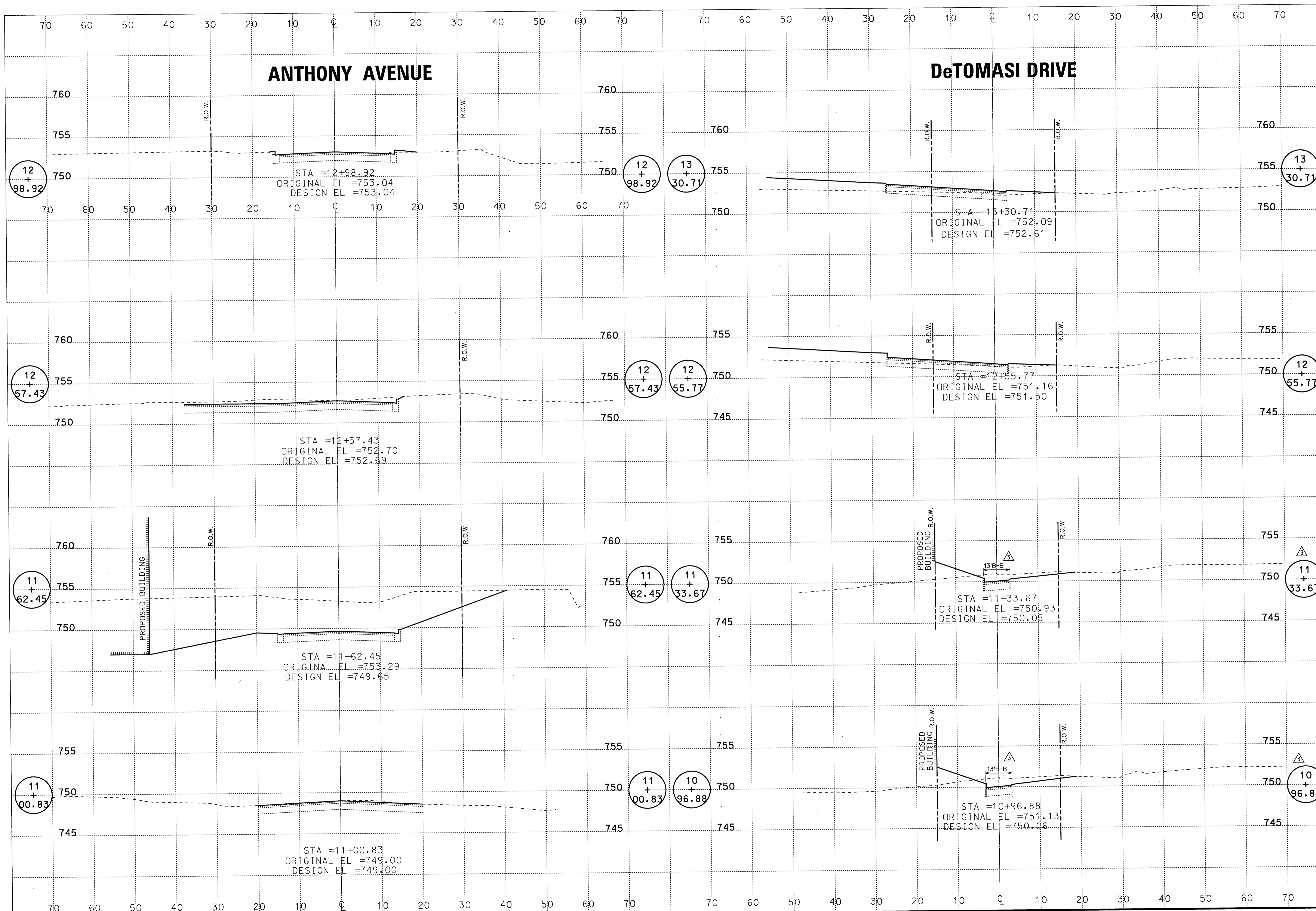
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1	9/17/13		

PLAN AND PROFILE - ANTHONY AVENUE
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

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NO.	DATE	REMARKS
3	03/03/14	PER VILLAGE COMMENTS, ADD R.O.W.
2	12/10/13	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

NO.	DATE	REMARKS
3	03/03/14	PER VILLAGE COMMENTS, ADD R.O.W.
2	12/10/13	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

CROSS SECTIONS
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

VANTAGE POINT
 ENGINEERING

1811 NORTH CREEK DRIVE
 TIMLEY PARK, IL 60477

312.938.4000
 INFO@VPENGS.COM

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This Soil Erosion & Sediment Control (SESC) Plan has been prepared to fulfill one of the requirements of the National Pollution Discharge Elimination System (NPDES) General Permit No. ILR10... The SESC Plan should be maintained on site as an integral component of the Storm Water Pollution Prevention Plan (SWPPP). The SWPPP, including the SESC Plan, should be amended whenever there is a change in design, construction, operation, or actual practice, which has a significant effect on the potential for the discharge of pollutants to the Waters of the State and which has not otherwise been addressed in the SWPPP. The SWPPP shall also be amended if it proves to be ineffective in eliminating or significantly minimizing pollutants, or in otherwise achieving the general objectives of the National Pollution Discharge Elimination System in storm water discharges associated with construction site activity. In addition, the SWPPP shall be amended to identify any new contractor and/or subcontractor that will implement a measure of the SWPPP.

1. SITE DESCRIPTION
- A. The following is a description of the nature of the construction activity: construction of government building, parking lot and access road
- B. The following is a description of the intended sequence of construction activities which will disturb soils for major portions of the construction site:

- Describe proposed construction sequence, sample follow:**
- 1) Install perimeter sediment control measure
 - 2) Selective vegetation removal for silt fence installation
 - 3) Silt fence installation
 - 4) Construction fencing around areas not to be disturbed
 - 5) Stabilized construction entrance
 - 6) Clear and grub (as necessary)
 - 7) Construct sediment trapping devices (sediment traps, sediment basins, etc.)
 - 8) Construct detention facilities and outlet control structure with restrictor & temporary perforated pipe
 - 9) Strip topsoil, stockpile topsoil and grade site
 - 10) Temporarily stabilize topsoil stockpiles (seed and silt fence around top of slope)
 - 11) Install storm sewer retention and outlet control structure
 - 12) Permanently stabilize detention basins with seed and erosion control blanket
 - 13) Temporarily stabilize all areas including lots that have received base grade
 - 10) Install roadways
 - 11) Permanently stabilize all outlet areas
 - 12) Install buildings and grade individual lots
 - 13) Permanently stabilize lots
 - 14) Remove all temporary soil erosion and sediment control measures after the site is stabilized with vegetation
- C. The site has a total acreage of approximately 1.7 acres. Construction activity will disturb approximately 1.7 acres of the site.
- D. 1) An estimated runoff coefficient of the site after construction activities are completed is 0.65.
2) Existing data describing the soil or quality of any discharge from the site is included in _____.
- E. Refer to Sheets SE1-EC3 for a site plan indicating:
- 1) drainage patterns
 - 2) approximate slopes anticipated before and after major grading activities
 - 3) locations where vehicles enter or exit the site and controls to minimize off-site sediment tracking
 - 4) areas of soil disturbance
 - 5) the location of major structural and non-structural controls
 - 6) the location of areas where stabilization practices are expected to occur
 - 7) surface waters (including wetlands) and
 - 8) locations where storm water is discharged to a surface water.
- F. 1) The name of the receiving water(s) is(are): Spring Drainage ditch
2) The name of the ultimate receiving water is: Mississippi River
3) The extent of wetland acreage of the site is 0 acres.

- G. Potential sources of pollution associated with this construction activity may include:
- sediment from disturbed soils
 - portable sanitary stations
 - fuel tanks
 - storage areas
 - waste containers
 - oil storage areas
 - oil or other petroleum products
 - adhesives
 - fuel
 - solvents
 - detergents
 - fertilizers
 - raw materials (e.g., bagged Portland cement)
 - construction debris
 - landscape waste
 - concrete and concrete trucks
 - litter
2. CONTROLS

This section of the SESC Plan describes the various controls that should be implemented for each of the major construction activities described in the "Site Description" section. For each measure identified in the SWPPP, the contractor shall identify the measure that will implement the control. All contractors and subcontractors that are identified should be required to sign a copy of the certification statement from Part IV.F. of the ILR10 Permit (in accordance with Part VI.G., Signature Requirements, of the ILR10 Permit). All signed certification statements should be maintained in the SWPPP.

A. Approved State or Local Plans

The management practices, controls and other provisions contained in the SWPPP should be at least as protective as the requirements contained in the Illinois Environmental Protection Agency's (IEPA) and the United States Department of Agriculture's Natural Resource Conservation Service Illinois Urban Manual, 2002. Requirements specified in sediment and erosion control site plans or site permits or storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submission of a Notice of Intent (NOI) to be authorized to discharge under the ILR10 permit, incorporated by reference and are enforceable under the ILR10 permit even if they are not specifically included in a SWPPP required under the ILR10 permit. This provision does not apply to provisions of master plans, comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit that is issued for the construction site.

The soil erosion and sediment control measures for this site should meet the requirements of the following agencies:

- Village of Mundelein
- Lake County
- IEPA
- U.S. Army Corps of Engineers

B. Control Implementation Schedule

Best Management Practices will be implemented on an as-needed basis to protect water quality. Perimeter controls of the site should be installed prior to soil disturbance (excluding soil disturbance necessary to install the controls), including demolition activities. Perimeter controls, including the silt fence, should be actively maintained until final stabilization of those portions of the site upland of the perimeter control. Stabilized construction entrances and sediment traps should be installed as described in the intended sequence of construction activities. The contractor is responsible for the adequate protection (including sediment control) of existing sewers and sewer structures during construction operations. As necessary, the appropriate sediment control measure should be installed prior to land disturbing activities.

Stabilization measures should be initiated where construction activities have temporarily or permanently ceased, in accordance with Local and State requirements, as described below. Once construction activity in an area has permanently ceased, that area should be permanently stabilized. Temporary perimeter controls should be removed after final stabilization of those portions of the site upland of the perimeter control.

C. Erosion and Sediment Controls

The appropriate soil erosion and sediment controls should be implemented on site and should be modified to reflect the current phase of construction. All temporary sediment and erosion control measures should be repaired or replaced as soon as practicable to maintain NPDES compliance. Permittee or an authorized agent is responsible for inspecting all sediment and erosion control measures at a minimum of every 7 calendar days and within 24 hours of the end of 0.5-inch (or greater) rain event, or snowfall equivalent.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices should be installed to the Standard Practice. The contractor is responsible for the installation of any additional erosion and sediment control measures necessary to minimize erosion and sedimentation as determined by the Engineer or Primary Contact.

1) Stabilization Practices - Areas that will not be paved or covered with non-erosive material should be stabilized using procedures in substantial conformance with the Illinois Urban Manual. This SESC Plan includes site-specific soil erosion and sediment control measures. Additional erosion controls should be implemented as necessary, as determined by the Engineer or Primary Contact.

The following temporary and permanent stabilization practices, at a minimum, are proposed:

- permanent seeding
- temporary seeding
- erosion control blanket
- other measures

Site-specific scheduling of the implementation of these practices is included in the Soil Protection Chart.

A record of the dates when major grading activities occur, when construction activities cease on a portion of the site, and when stabilization measures are initiated should be included in the SWPPP.

Except as provided in paragraphs (a) and (b) below, stabilization measures shall be initiated as soon as practicable on portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity on that portion of the site has temporarily or permanently ceased.

(a) Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceased is precluded by snow cover, stabilization measures shall be initiated as soon as practicable.

(b) Where construction activity will resume on a portion of the site within 14 days from when activities ceased, (e.g., the total time period that construction activity is temporarily ceased is less than 14 days) then stabilization measures do not have to be initiated on that portion of site by the 7th day after construction activity temporarily ceased.

2) Structural Practices - Provided below is a description of structural practices that should be implemented, to the degree attainable to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural practices should be placed on upland soils to the degree practicable. The installation of the following devices may be subject to Section 404 of the Clean Water Act:

- stabilized construction entrance
- silt fence
- sediment traps (provide locations and dimensions in plan set)
- other measures

D. Storm Water Management

Provided below is a description of measures that will be installed during the construction process to control the pollutants in storm water discharges that will occur after the construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1) The practices selected for implementation were determined on the basis of technical guidance contained in IEPA's Illinois Urban Manual, Federal, State, and/or Local Requirements. The storm water management measures include:

- storm sewers
- silt fence detention ponds

2) Velocity dissipation devices, such as rip-rap aprons at filed and sections or level spreaders, shall be placed at discharge locations and along the length of any natural channel as necessary to provide a non-erosive velocity flow from the structure to a watercourse so that the natural, physical, and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

E. Waste Management

Solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed of off site by the contractor. The contractor is responsible to acquire the permit required for such disposal. Burning on site will not be permitted. No solid materials, including building materials, shall be discharged to Waters of the State, except as authorized by a Section 404 permit. All waste materials should be collected and stored in approved receptacles. No wastes should be placed in any location other than in the approved containers appropriate for the materials being disposed. There should be no liquid waste deposited into dumpsters or other containers which may leak. Receptacles with deficiencies should be repaired as soon as possible and the appropriate clean-up procedure should take place, if necessary. Construction waste material is not to be buried on site. Waste disposal should comply with all Local, State, and Federal regulations.

On-site hazardous material storage should be minimized and stored in labeled, separate receptacles from non-hazardous wastes. All hazardous waste should be disposed of in the manner specified by Local or State regulation or by the manufacturer.

F. Concrete Waste Management

Concrete waste or washout should not be allowed in the street or allowed to reach a storm water drainage system or watercourse. When practicable, a sign should be posted at each location to identify the washout. To the extent practicable, concrete washout areas should be located a reasonable distance from a storm water drainage inlet or watercourse, and should be located at least 10 feet behind the curb, if the washout area is adjacent to a paved road. A stabilized entrance that meets Illinois Urban Manual standards should be installed at each washout area.

The containment facilities should be of sufficient volume to completely contain all liquid and concrete waste materials including enough capacity for anticipated levels of rainwater. The dried concrete waste material should be picked up and disposed of properly when 75% capacity is reached. Hardened concrete can be properly recycled and used again on site (as approved by the Engineer) or hauled off site to an appropriate landfill.

G. Concrete Cutting

Concrete waste management should be implemented to contain and dispose of saw-cutting slurries. Concrete cutting should be cleaned-up and disposed into the concrete washout facility as described above.

H. Vehicle Storage and Maintenance

When not in use, construction vehicles should be stored in a designated area(s) outside of the regulatory floodplain, away from any natural or created watercourse or storm drainage, or storm drain. Controls should be installed to minimize the potential of runoff from the storage areas from reaching storm drains or water courses. Vehicle maintenance (including both routine maintenance as well as on-site repairs) should be made within a designated area(s) to prevent the migration of mechanical fluids (oil, antifreeze, etc.) into watercourses, wetlands or storm drains. Drip pans or absorbent pads should be used for all vehicle and equipment maintenance that involve greases, oil, antifreeze, solvents and other vehicle-related chemicals should be removed from site. Disposal of all used oil, antifreeze, solvents and other vehicle-related chemicals in accordance with United States Environmental Protection Agency (USEPA) and IEPA regulations and per Material Safety Data Sheet (MSDS) and/or manufacturer instructions. Contractors should immediately report spills to the Primary Contact.

I. Material Storage and Good Housekeeping

Materials and/or contaminants should be stored in a manner that minimizes the potential to discharge into storm drains or watercourses. An on-site area should be designated for material delivery and storage. All materials kept on site should be stored in their original containers with legible labels, and if possible under a roof or other enclosure. Labels should be replaced if damaged or difficult to read. Bermed, bonded storage areas are an acceptable control measure to prevent contamination of storm water. MSDS should be available for referencing cleanup procedures. Any release of chemicals/contaminants should be immediately cleaned up and disposed of properly. Contractors should immediately report all spills to the Primary Contact, who should notify the appropriate agencies, if needed.

To reduce the risks associated with hazardous materials on site, hazardous products should be kept in original containers until they are no longer needed. The original labels and MSDS should be retained on site until all these hazardous materials and all other material on site should be stored in accordance with manufacturer or MSDS specifications. When disposing of hazardous materials, follow manufacturer or Local and State recommended methods.

The following good housekeeping practices should be followed on site during the construction project:

- An effort should be made to store only enough product required to do the job.
- All materials stored on site should be stored in a neat, orderly manner in their appropriate containers and adequately protected from the environment.
- Products should be kept in their original containers with the original manufacturer's label.
- Substances should not be mixed with one another unless recommended by the manufacturer.
- Operations should be observed as necessary to ensure proper use and disposal of materials on site.
- Whenever possible, all of a product should be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal should be followed.

J. Management of Portable Sanitary Stations

To the extent practicable, portable sanitary stations should be located in an area that does not drain to any protected natural areas, Waters of the State, or storm water structures and should be anchored to the ground to prevent from tipping over. Portable sanitary stations located on impervious surfaces should be placed on top of a secondary containment device, or be surrounded by a control device (e.g., gravel-bag berm). The contractor should not create or allow unsanitary conditions. Sanitary waste should be disposed of in accordance with applicable State and/or Local regulations.

K. Spill Prevention and Clean-Up Procedures

Manufacturer's recommended methods for spill clean-up should be available and site personnel should be made aware of the procedures and the location of the information and clean-up supplies. Materials and equipment necessary for spill clean-up should be kept in the material storage area on site. Equipment and materials include brooms, dust pans, rags, gloves, goggles, kitty litter, sand, sawdust and plastic and/or metal trash containers specifically for this purpose.

Discharges of a hazardous substance or oil caused by a spill (e.g., a spill of oil into a separate storm sewer or Waters of the State) are not authorized by the ILR10 permit. If a spill occurs, notify the Primary Contact immediately. The construction site should have the capacity to control, contain, and remove spills. If they occur, Spills should be cleaned up immediately (after discovery) in accordance with MSDS and should not be buried on site or washed into storm sewer drainage inlets, drainage-ways, or Waters of the State.

Spills in excess of Federal Reportable Quantities (as established under 40 CFR Parts 110, 117, or 302), should be reported to the National Response Center by calling (800) 424-8802. MSDS often include information on Federal Reportable Quantities for materials that are toxic or hazardous materials should be reported to the appropriate State or Local government agency, as required. When cleaning up a spill, the area should be kept well ventilated and appropriate personal protective equipment should be used to minimize injury from contact with a hazardous substance.

In addition to the good housekeeping and other management practices discussed in the previous sections of these Notes, the following minimum practices should be followed to reduce the risk of spills:

- On-site vehicles should be monitored for leaks and should receive regular preventative maintenance to reduce the chance of leakage.
- Petroleum products should be stored in tightly sealed and clearly labeled containers.
- Contractors should follow the manufacturer's recommendations for proper use, storage, and disposal of materials. Excess materials should be disposed of according to the manufacturer's instructions or State and Local regulations, and should not be discharged to the storm sewer or waterbody.

L. De-Watering Operations

During de-watering/pumping operations, only uncontaminated water should be allowed to discharge to protected natural areas, Waters of the State, or to a storm sewer system (in accordance with Local permits). Inlet hoses should be placed in a stabilized silt pit or floated at the surface of the water in the amount of sediment intake. Pumping operations may be discharged to a stabilized area that consists of an energy dissipating device (e.g., stone), sediment filter bag, or both. Adequate erosion control should be used during de-watering operations as necessary. Stabilized conveyance channels should be installed to direct water to the desired location as applicable. Additional control measures may be installed at the outlet area at the discretion of the Primary Contact or Engineer.

M. Off-Site Vehicle Tracking

The site should have one or more stabilized construction entrances in conformance with the Plan details. Stabilized construction entrances should be installed to help reduce vehicle tracking of sediments. Streets should be swept as needed to reduce excess sediment, dirt, or stone tracked from the site. Maintenance may include top dressing the stabilized entrance with additional stone and removing top layers of stone and sediment as needed. Vehicles hauling erodible material to and from the construction site should be covered with a tarp. N. Topsoil Stockpile Management

If topsoil is to be stockpiled at the site, select a location so that it will not erode, block drainage, or interfere with work on site. Topsoil stockpiles should not be located in the 100-year floodplain or designated buffer protecting Waters of the State. During construction of the project, soil stockpiles should be stabilized or protected with sediment trapping measures. Perimeter controls, such as silt fence, should be installed immediately. Stabilization of the stockpile to reduce the risk of erosion should be completed if the stockpile is to remain undisturbed for longer than thirty days.

O. Dust Control

Dust control should be implemented on site as necessary. Repetitive treatment should be applied as needed to accomplish control when temporary dust control measures are used. A water truck should be present on site (or available for sprinkling/irrigation) to limit the amount of dust leaving the site. Watering should be applied daily (or more frequently) to be effective. Caution should be used not to overwater, as that may cause erosion.

If field observations indicate that additional protection from wind erosion (in addition to, or in place of watering) is necessary, alternative dust suppressant controls should be implemented at the discretion and approval of the Engineer and/or Primary Contact.

Street cleaning should also be used as necessary to control dust. Paved areas that have soil on them from the construction site should be cleaned as needed, utilizing a street sweeper or bucket-type endloader or scraper at the direction of the Engineer and/or Primary Contact.

3. MAINTENANCE

Maintenance of the controls incorporated into this project should be performed as needed to assure their continued effectiveness. This includes prompt and effective repair and/or replacement of deficient control measures. The following is a description of procedures that should be used to maintain, in good and effective operating condition, erosion and sediment control measures and other protective measures identified in the SESC Plan and Standard Specifications.

Dust control: When temporary dust control measures are used, repetitive treatment should be applied as needed to accomplish control.

Sediment filter bags: Sediment filter bags should be installed on pump outlet hoses that discharge off site or to sensitive on-site areas, and should be placed in an area that allows for the bag to be removed without producing a sediment discharge. The bags should be inspected frequently and repaired or replaced as needed.

Silt fence: Silt fences should be inspected regularly for undercutting where the fence meets the ground, overlapping and tears along the length of the fence. Deficiencies should be repaired immediately. Remove accumulated sediments from the fence base when the sediment reaches one-half the fence height. During final stabilization, properly dispose of any sediment that has built up behind the silt fence. Alternative sediment control measures should be considered for areas where silt fence continually fails.

Stabilized construction entrances: The stabilized construction entrances should be maintained to prevent tracking of sediment onto public streets. Maintenance includes top dressing with additional stone and removing top layers of stone and sediment. The sediment tracked onto the public right-of-way should be removed immediately.

Temporary sediment traps: Temporary sediment traps should be inspected after each period of significant rainfall. Remove sediment and restore the trap to its original dimensions when the sediment has accumulated to one-half the design depth of the permanent pool. Place the sediment that is removed in a designated disposal area. The structure for damage from erosion or piping. After all sediment-producing areas have been permanently stabilized, remove the structure and all unstable sediment. Grade the area to blend with the adjoining areas and stabilize properly.

4. INSPECTIONS

The Permittee (or their authorized representative) will be responsible for conducting site inspections in compliance with the ILR10 NPDES Permit. After each inspection, a report should be prepared by the qualified personnel who conducted the inspection. The inspection report should be maintained on site as part of the SWPPP.

Inspections should be conducted at least once every seven calendar days and within 24 hours of the end of a storm event that is 0.5 inches or greater, or equivalent snowfall.

Each inspection should include the following components:

A. Disturbed areas and areas used for the storage of materials that are exposed to precipitation should be inspected for evidence of, or the potential for, pollutants entering the drainage system. The erosion and sediment control measures identified in the SWPPP should be observed to ensure that they have been installed and are operating correctly. Where discharge points are accessible, they should be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site should be inspected for off-site sediment tracking. All pumping operations and other potential non-storm water discharge sources should also be inspected.

B. Based on the results of the inspection, the description of potential pollutant sources identified, and the pollution prevention measures described in the SWPPP should be revised, as appropriate, as soon as practicable after the inspection, if any, shall provide for timely implementation of any changes to the SWPPP within 7 calendar days following the inspection.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph B, above should be made and retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The report shall be signed in accordance with Part VI.G. (Signature Requirements) of the ILR10 NPDES Permit.

D. The Permittee shall notify the appropriate agency field operations section office by e-mail at: epd.enforcement@illinois.gov , telephone or fax within 24 hours of any incidence of non-compliance for any violation of the storm water pollution prevention plan observed during any inspection conducted or for violation of any condition of this permit. The Permittee should complete and submit within 5 days an incidence of Non-Compliance (IONC) report for any violation of the SWPPP observed during an inspection conducted, including those not required by the SWPPP. Submission should be on forms provided by IEPA and include specific information on the cause of non-compliance, actions which were taken to prevent any further causes of non-compliance, and a statement detailing any environmental impact, which may have resulted from the non-compliance.

E. All reports of non-compliance shall be signed by a responsible authority as defined in Part VI.G. (Signature Requirements), of the ILR10 NPDES Permit.

F. After the Initial contact has been made within the appropriate agency field operations section office, all reports of non-compliance shall be mailed to IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

5. NON-STORM WATER DISCHARGES

Except for flows from fire fighting activities, possible sources of non-storm water that may be combined with storm water discharges associated with the proposed activity, are described below:

- Water used to wash vehicles where detergents are not used;
- Water used to control dust;
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed) and where detergents are not used;
- Irrigation ditches;
- Uncontaminated ground water and;
- Foundation or footing drains where flows are not contaminated with process materials such as solvents;
- Landscape irrigation drainages;
- Uncontaminated air conditioning condensate.

Pollution prevention measures should be implemented for non-storm water components of the discharge.

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A									
DORMANT SEEDING											B	
TEMPORARY SEEDING			C			D						
SODDING			E									
MULCHING												

A KENTUCKY BLUEGRASS 90 LBS/ACRE
MIXED WITH PERENNIAL RYEGRASS
30 LBS/ACRE

C SPRING OATS 100 LBS/ACRE
D WHEAT OR CEREAL RYE
150 LBS/ACRE

B KENTUCKY BLUEGRASS 135 LBS/ACRE
MIXED WITH PERENNIAL RYEGRASS
45 LBS/ACRE + STRAW MULCH 2 TONS/ACRE.

E SOD
F STRAW MULCH 2 TONS/ACRE.

* IRRIGATION NEEDED DURING JUNE AND JULY.
** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.

SOIL PROTECTION CHART

CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

PROJECT: _____ DATE _____

PERMIT # ILR10 TELEPHONE NUMBER _____

CONTRACTOR SIGNATURE _____

PRINTED NAME & TITLE _____

NAME OF CONTRACTING FIRM _____

STREET ADDRESS _____

CITY, STATE, ZIP CODE _____

TRADE/ RESPONSIBILITIES: _____

OWNER SWPPP CERTIFICATION

PROJECT: _____

PERMIT # ILR10

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY DESIGN AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE OF OWNER _____ DATE _____

PRINTED NAME OF OWNER _____

NOTE: ALL CONTRACTORS PERFORMING WORK ON THIS SITE ARE REQUIRED TO SIGN A CONTRACTOR CERTIFICATION STATEMENT AS ILLUSTRATED ABOVE. THE SIGNED STATEMENTS WILL BE MAINTAINED ON THE SITE WITH THE SWPPP.

NOTE: THE CERTIFICATION ILLUSTRATED ABOVE SHALL BE SIGNED BY THE OWNER LISTED ON THE NOTICE OF INTENT AND ACCORDANCE WITH PART VI.G. OF THE ILR10 NPDES PERMIT. THE SIGNED STATEMENT SHALL BE MAINTAINED ON THE SITE WITH THE SWPPP.

SOIL EROSION AND SEDIMENT CONTROL PLAN

CARDINAL SQUARE
MUNDELEIN, ILLINOIS

1 9/17/13 PER VILLAGE COMMENTS
NO. DATE REMARKS

1 9/17/13 PER VILLAGE COMMENTS
NO. DATE REMARKS

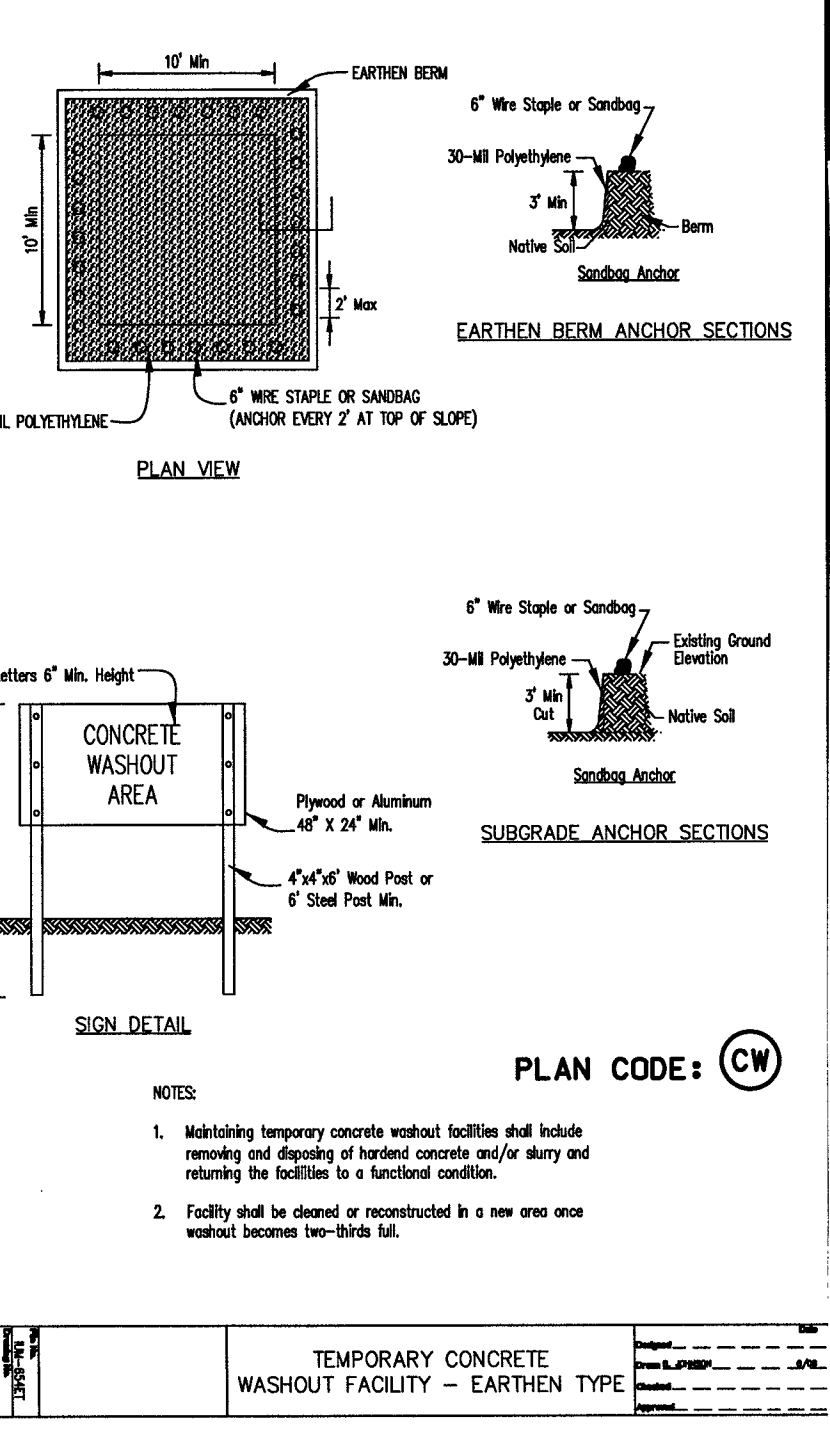
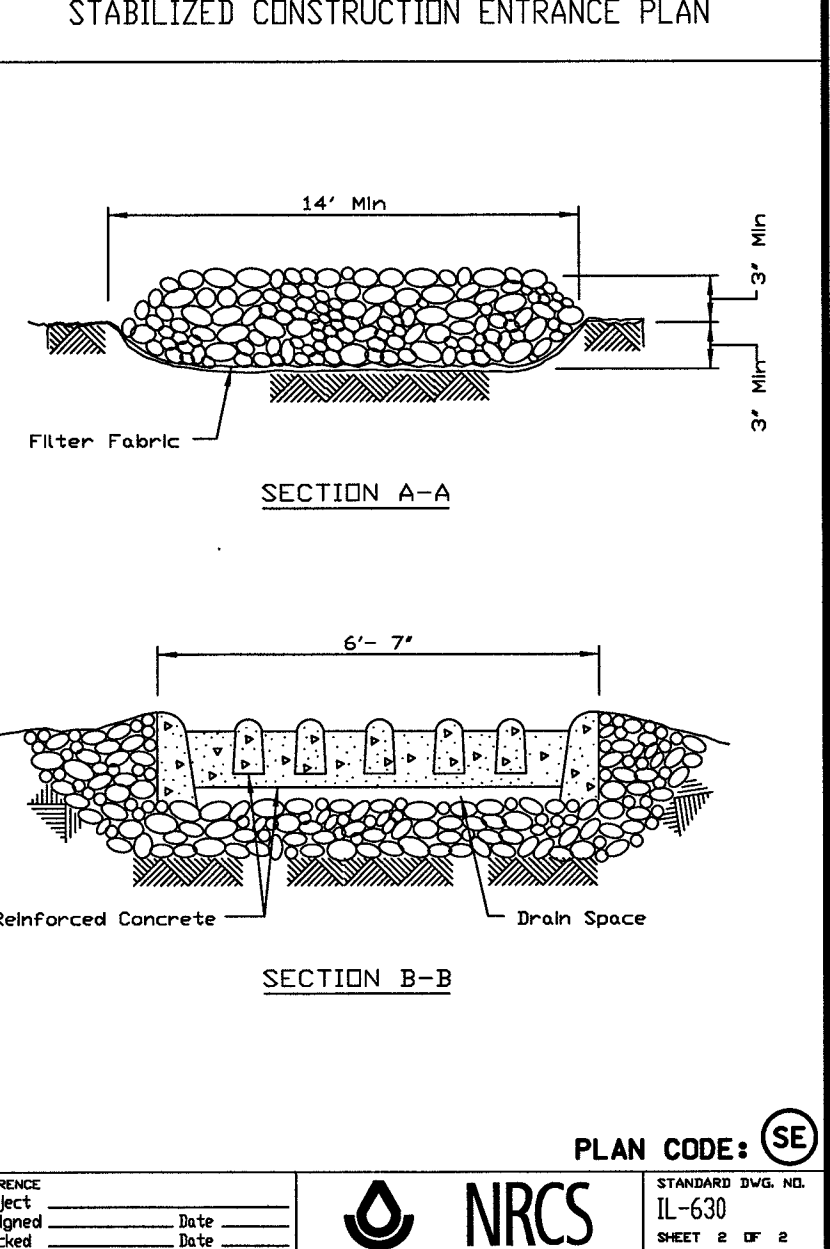
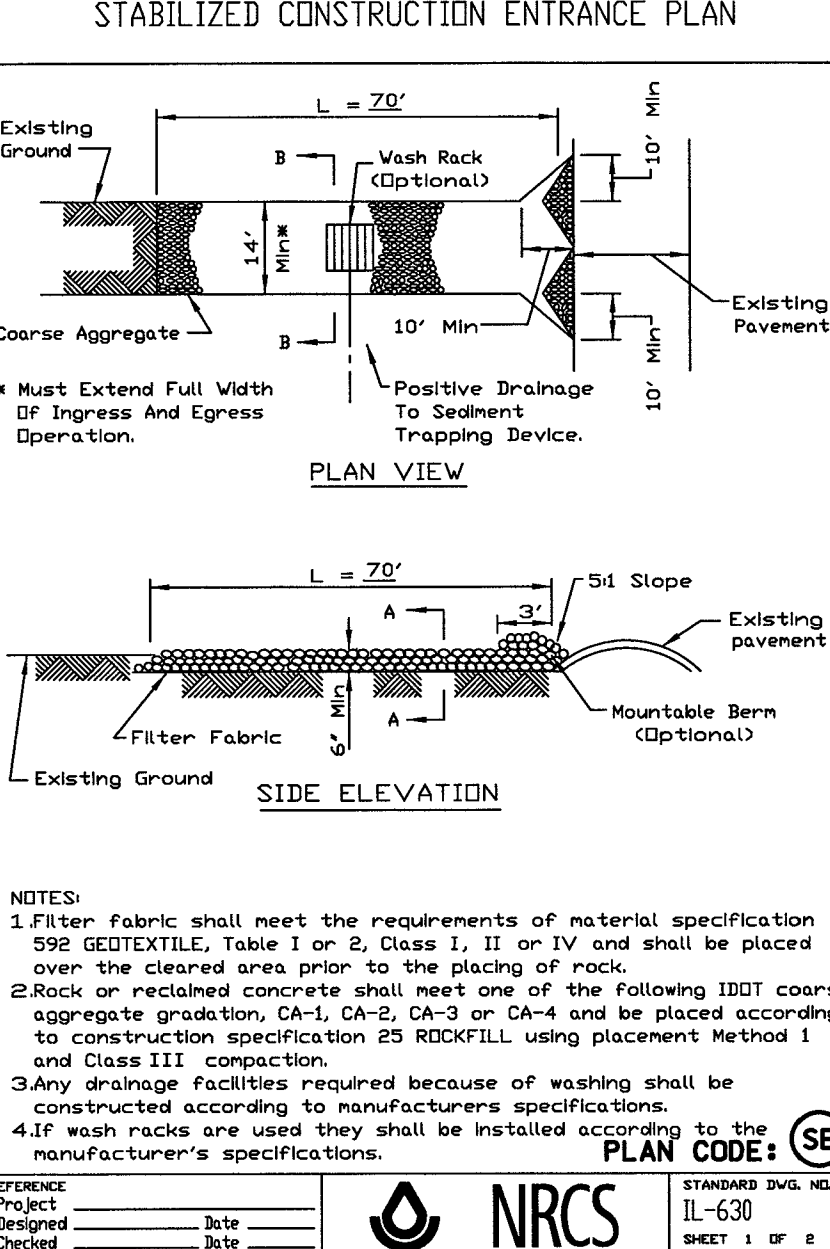
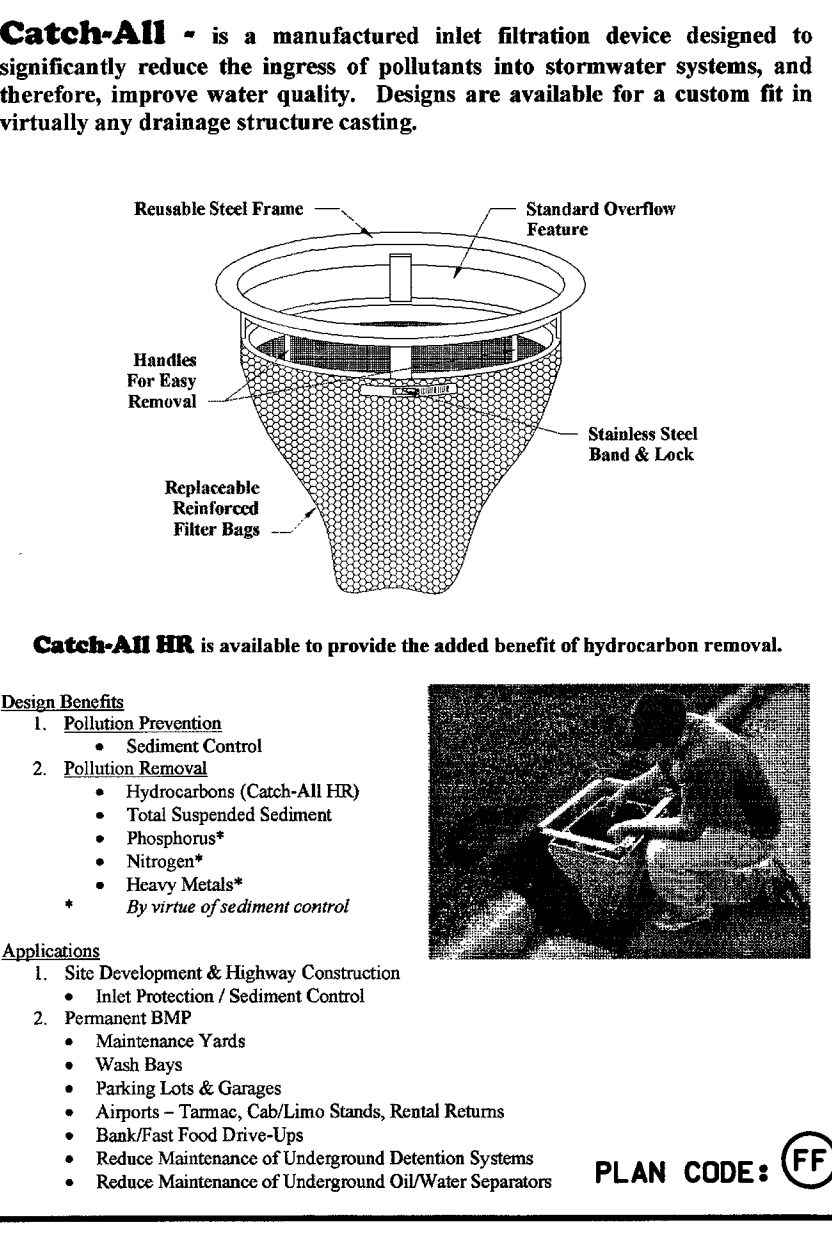
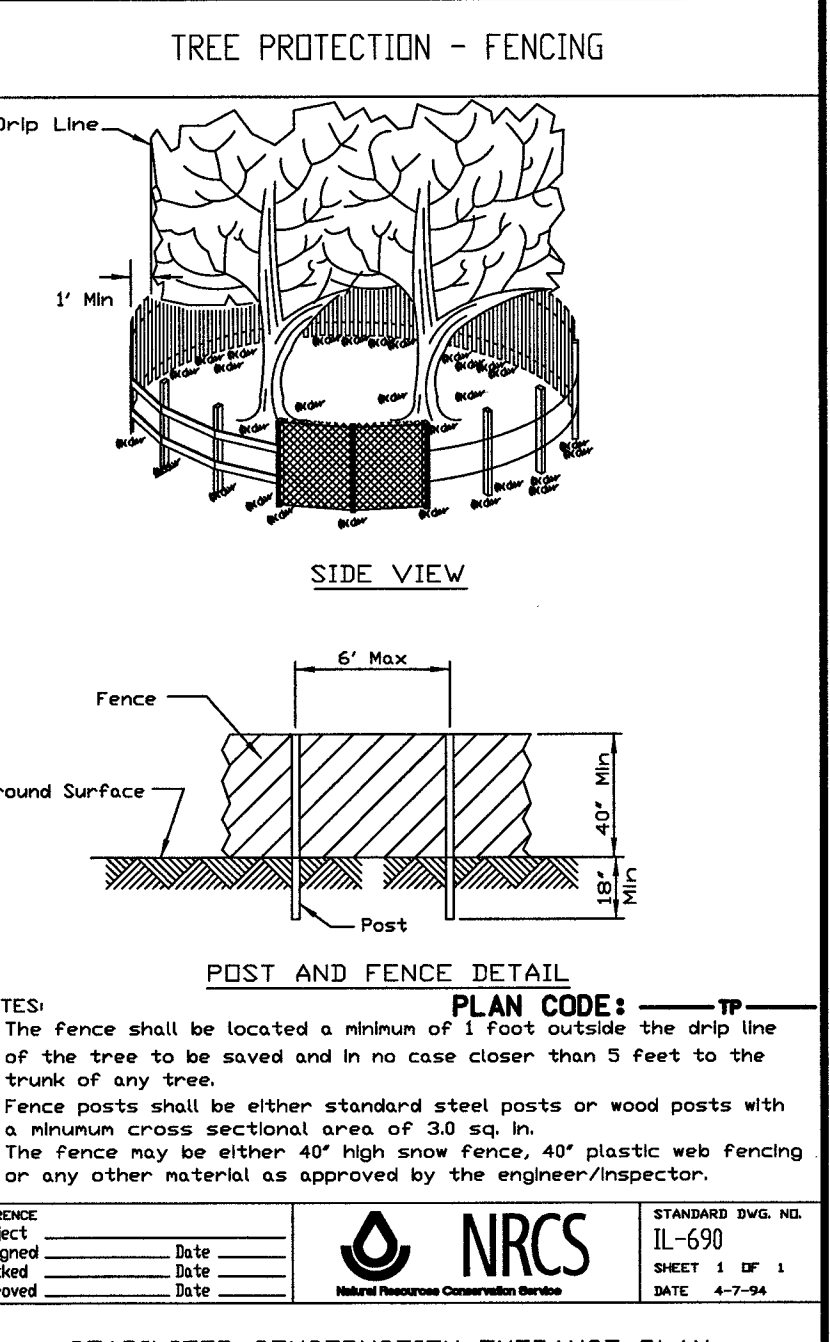
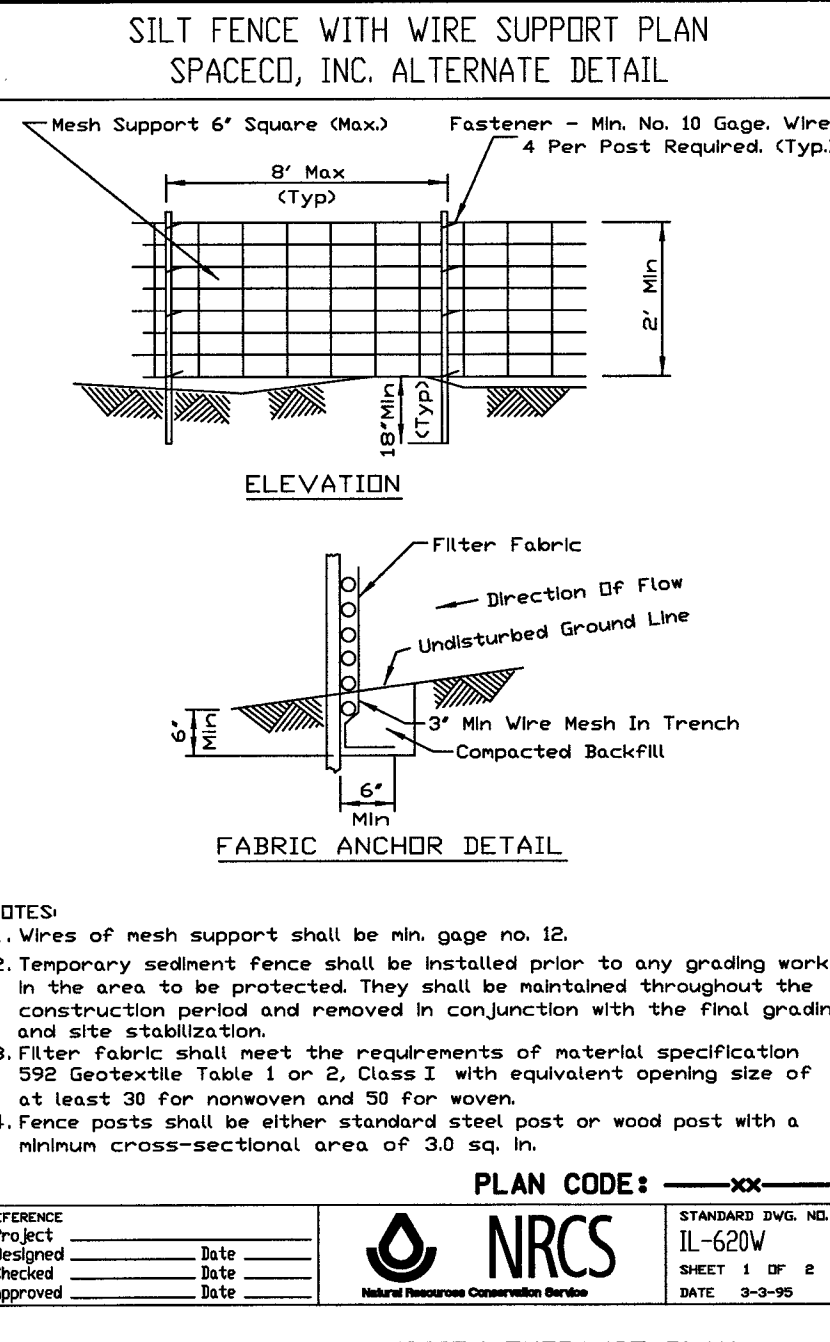
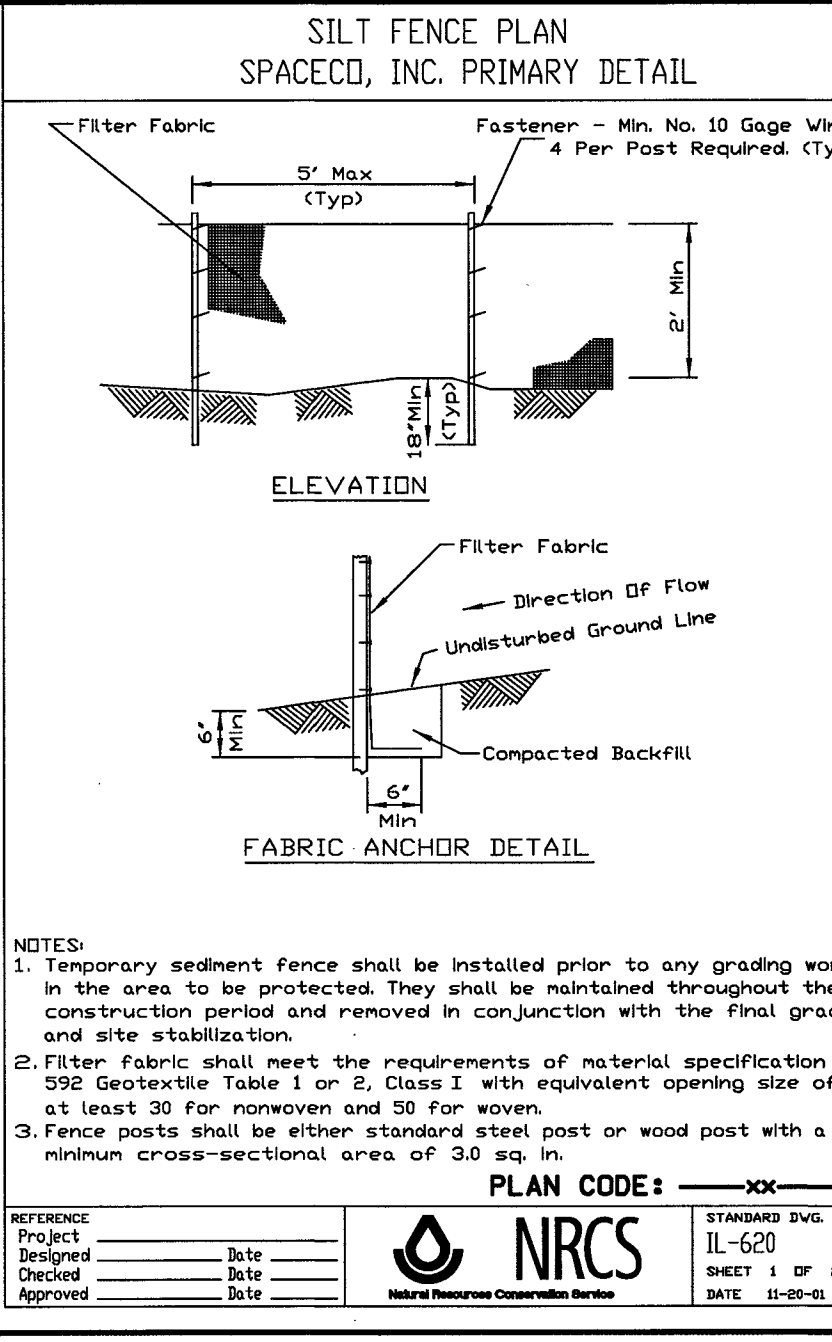
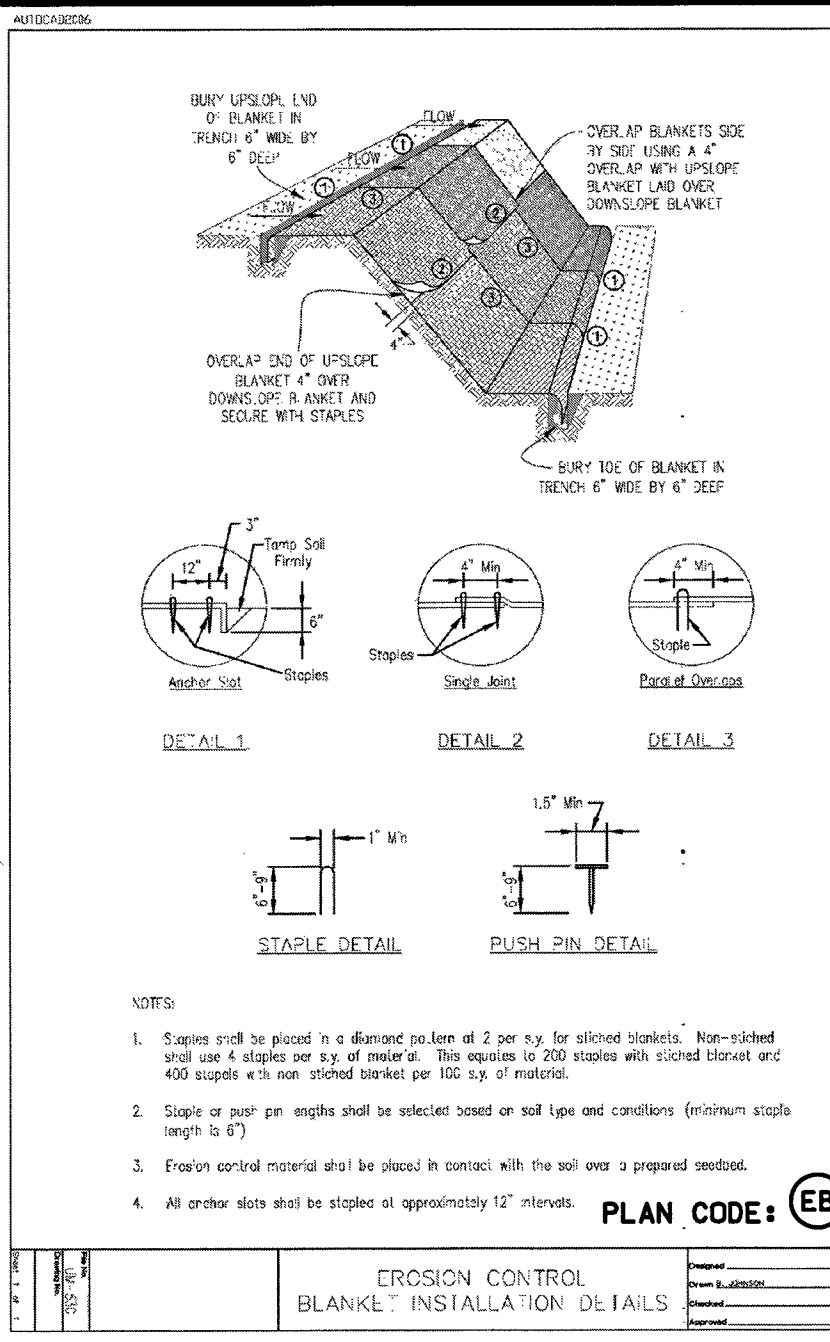
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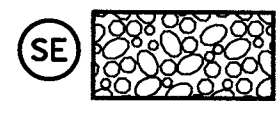
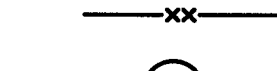


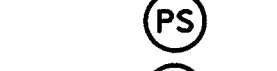



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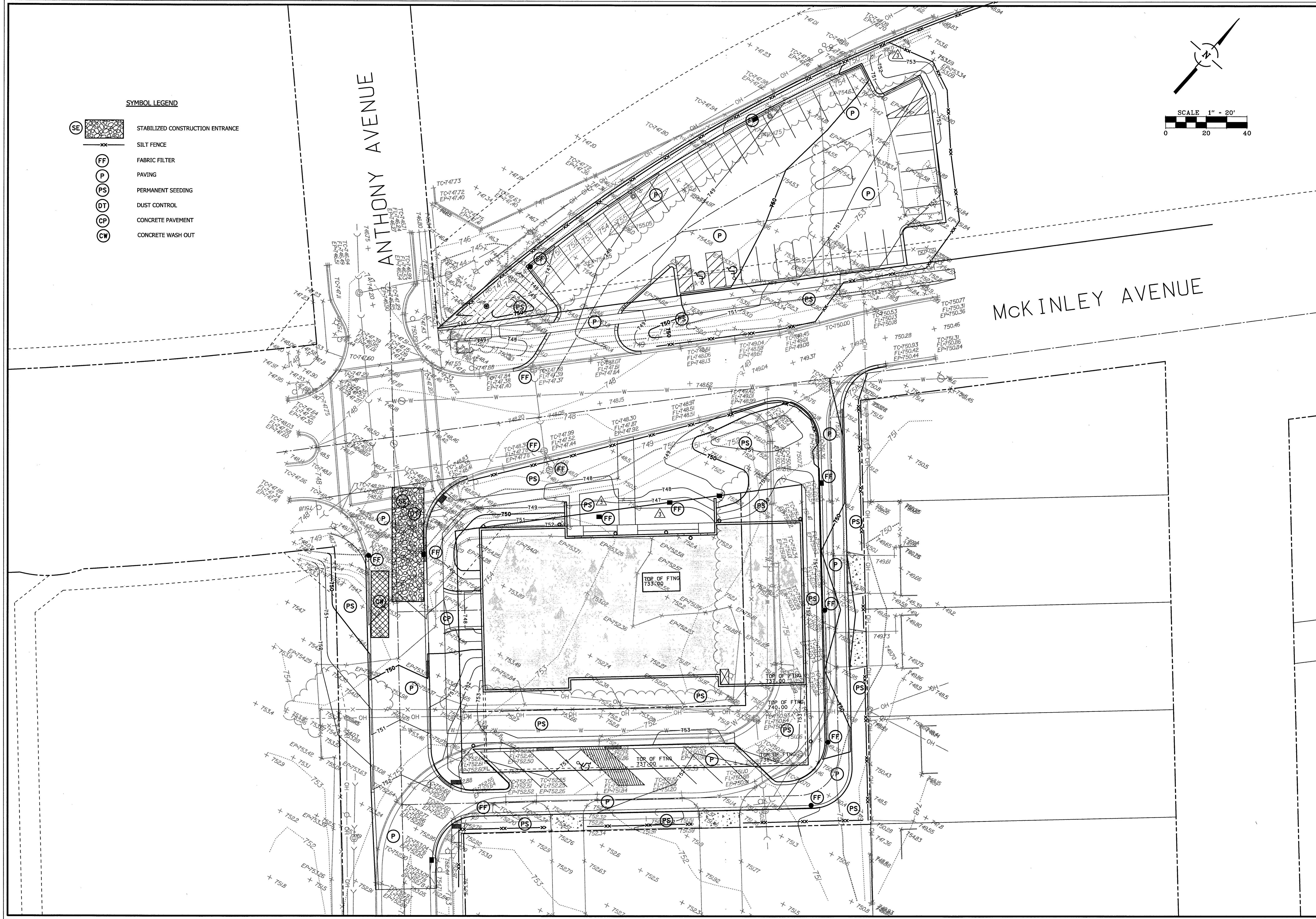
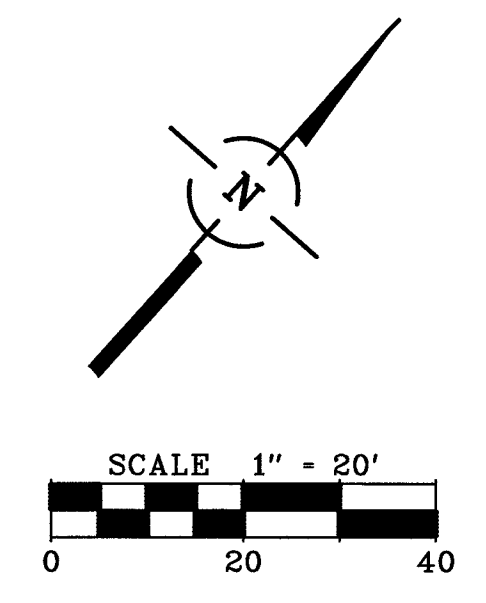
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NO.	DATE	REMARKS
1	9/7/13	PER VILLAGE COMMENTS

SYMBOL LEGEND

	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE
	FABRIC FILTER
	PAVING
	PERMANENT SEEDING
	DUST CONTROL
	CONCRETE PAVEMENT
	CONCRETE WASH OUT



NO.	DATE	REMARKS

3	03/03/14	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

SOIL EROSION CONTROL PLAN
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

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EARTHWORK NOTES

1. GENERAL
- A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE SOIL AND GROUNDWATER CONDITIONS AT THE SITE. THE CONTRACTOR SHALL OBTAIN AND READ THE GEOTECHNICAL REPORTS AVAILABLE FROM THE OWNER.
 - B. ANY QUANTITIES IN THE BID PROPOSAL ARE INTENDED AS A GUIDE FOR THE CONTRACTOR'S USE IN DETERMINING THE SCOPE OF THE COMPLETED PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRAISE THEMSELF OF ALL SITE CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS LUMP SUM FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED UNLESS DETAILED IN WRITING BY THE OWNER.
 - C. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE ELEVATIONS AND THAT PAVEMENT THICKNESS, TOPSOIL, ETC. MUST BE SUBTRACTED TO DETERMINE SUBGRADE ELEVATIONS.
 - D. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION, AND PREVENT STORMWATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS. THE FAILURE TO PROVIDE PROPER DRAINAGE WILL NEGATE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION AND TRAFFIC.
 - E. PLANS FOR THE SITE DEWATERING, IF EMPLOYED, SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER PRIOR TO IMPLEMENTATION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR DEWATERING DURING CONSTRUCTION.
 - F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES. THE INITIAL ESTABLISHMENT OF EROSION CONTROL PROCEDURES AND THE PLACEMENT OF SILT AND FILTER FENCING, ETC. TO PROTECT ADJACENT PROPERTY, WETLANDS, ETC. SHALL OCCUR BEFORE GRADING BEGINS. A MUNICIPAL EROSION CONTROL INSPECTION MAY BE REQUIRED BEFORE ANY EARTHWORK IS PERFORMED.
 - G. PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL ERECT A "SNOW FENCE" AROUND ANY TREE DESIGNATED TO BE PRESERVED. SAID FENCE SHALL BE PLACED IN A CIRCLE CENTERED AROUND THE TREE, THE DIAMETER OF WHICH SHALL BE SUCH THAT THE ENTIRE DRIP ZONE (EXTENT OF FURTHEST EXTENDING BRANCHES) SHALL BE WITHIN THE FENCE LIMITS. THE EXISTING GRADE WITHIN THE FENCED AREA SHALL NOT BE DISTURBED.
 - H. EXCESS MATERIALS, IF NOT UTILIZED AS FILL, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.
 - I. ALL EARTHWORK SHALL BE DONE UNDER THE SUPERVISION OF AN ILLINOIS LICENSED ENGINEER WHO SPECIALIZES IN THE GEOTECHNICAL FIELD (SOILS ENGINEER). THIS ENGINEER WILL BE RESPONSIBLE FOR ENSURING THAT ALL UNSUITABLE MATERIALS ARE REMOVED, ALL STRUCTURAL FILL MATERIALS ARE PROPERLY PLACED AND COMPACTED, ALL PAVEMENT SUBGRADES ARE PROPERLY PREPARED, PROOF ROLLING SUBGRADES AND BASE COURSES, AND ENSURING THAT ALL WATER RETAINING EMBANKMENTS ARE PROPERLY CONSTRUCTED. THE DEVELOPER PAYS FOR ALL GEOTECHNICAL SERVICES.
2. TOPSOIL EXCAVATION INCLUDES:
- A. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL. EXISTING VEGETATION SHALL BE REMOVED PRIOR TO STRIPPING TOPSOIL OR FILLING AREAS.
 - B. PLACEMENT OF THE EXCAVATED MATERIAL IN OWNER DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL. PROVIDE NECESSARY EROSION CONTROL MEASURES FOR STOCKPILE.
 - C. TOPSOIL STOCKPILED FOR RESPAID SHALL BE FREE OF CLAY AND SHALL NOT CONTAIN ANY OF THE TRANSITIONAL MATERIAL BETWEEN THE TOPSOIL AND CLAY. THE TRANSITIONAL MATERIAL SHALL BE USED IN NON-STRUCTURAL FILL AREAS OR DISPOSED OF OFF-SITE.
 - D. TOPSOIL RESPAID SHALL INCLUDE HAULING AND SPREADING 6" OF TOPSOIL OVER AREAS TO BE LANDSCAPED WHERE SHOWN ON THE PLANS OR DIRECTED BY THE OWNER.
 - E. MODERATE COMPACTION IS REQUIRED IN NON-STRUCTURAL FILL AREAS.
3. EARTH EXCAVATION INCLUDES:
- A. EXCAVATION OF CLAY AND OTHER MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.1 FEET OF THE PLAN SUBGRADE ELEVATIONS WHILE MAINTAINING PROPER DRAINAGE. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIALS SHALL "BALANCE" DURING THE FINE GRADING OPERATION.
 - B. PLACEMENT OF THE CLAY AND OTHER SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.1 FEET. THE FILL MATERIAL SHALL BE PLACED IN LAYER THICKNESSES THAT SHALL NOT EXCEED EIGHT (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE REQUIRED COMPACTION. STRUCTURAL FILL MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE SITE NOT REQUIRING STRUCTURAL FILL. TO WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION. IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THIS MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.
 - C. COMPACTION OF THE CLAY AND OTHER SUITABLE MATERIALS SHALL BE TO AT LEAST 93% OF THE MODIFIED PROCTOR DRY DENSITY WITHIN PROPOSED PAVEMENT AREAS, SIDEWALKS, ETC. COMPACTION SHALL BE AT LEAST 95% OF THE MODIFIED PROCTOR WITHIN PROPOSED BUILDING PAD AREAS.
 - D. EXCAVATION: QUANTITIES OF EARTH EXCAVATION INDICATED ELSEWHERE IN THIS CONTRACT HAVE BEEN COMPUTED BY THE END AREA METHOD AS PROVIDED FOR IN SECTION 202 OF THE STANDARD SPECIFICATIONS. EXCAVATED MATERIALS NOT NEEDED FOR THIS JOB SITE SHALL BE LEGALLY DISPOSED OF. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF EARTH EXCAVATION.
4. UNSUITABLE MATERIAL
- UNSUITABLE MATERIAL SHALL BE CONSIDERED AS MATERIAL WHICH IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT AND BUILDING CONSTRUCTION, AND IS ENCOUNTERED BELOW NORMAL TOPSOIL DEPTHS AND THE PROPOSED SUBGRADE ELEVATION. THE DECISION TO REMOVE SAID MATERIAL, AND TO WHAT EXTENT, SHALL BE MADE BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

PAVING NOTES

1. GENERAL
- A. PAVING WORK INCLUDES FINAL SUBGRADE PREPARATION AND COMPACTION; PLACEMENT OF CURB-OR-BASE COURSE MATERIALS; BITUMINOUS BINDER AND/OR SURFACE COURSES; FORMING, FINISHING AND SLAB-ON-CONCRETE PAVEMENT, CURBS AND WALKS; AND FINAL CLEAN-UP AND ALL RELATED WORK.
 - B. COMPACTION REQUIREMENTS: [REFERENCE ASTM D-1557 (MODIFIED PROCTOR)] SUB-GRADE = 95%; SUB-BASE = 95%; AGGREGATE BASE COURSE = 95%; BITUMINOUS COURSES = REFER TO SPEC ARTICLE 406.07. THE SOILS ENGINEER IS RESPONSIBLE FOR ENSURING THAT THE MATERIALS ARE PROPERLY PLACED AND COMPACTED.
 - C. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE PROPER BARRICADING, WARNING DEVICES AND THE SAFE MANAGEMENT OF TRAFFIC WITHIN THE AREA OF CONSTRUCTION. ALL SUCH DEVICES AND THEIR INSTALLATION SHALL CONFORM TO THE ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND IN ACCORDANCE WITH THE MUNICIPAL CODE.
2. SUB-GRADE PREPARATION
- A. EARTHWORK FOR PROPOSED PAVEMENT SUBGRADE SHALL BE FINISHED TO WITHIN 0.1 FOOT, PLUS OR MINUS, OF PLAN ELEVATION. THE CONTRACTOR SHALL Satisfy HIMSELF THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED AND THAT THE FINISH TOP SUBGRADE ELEVATION HAS BEEN GRADED WITHIN TOLERANCES ALLOWED IN THESE SPECIFICATIONS. UNLESS THE CONTRACTOR ADVISES THE OWNER AND ENGINEER IN WRITING PRIOR TO FINE GRADING FOR BASE COURSE CONSTRUCTION, IT IS UNDERSTOOD THAT HE HAS APPROVED AND ACCEPTS THE RESPONSIBILITY FOR THE SUBGRADE.
 - 1) REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL.
 - 2) REMOVE AND REPLACE WITH GRANULAR MATERIAL.
 - 3) REMOVE AND REPLACE WITH GRANULAR MATERIAL.
 - 4) USE OF GEOTEXTILE FABRIC.
 - B. PRIOR TO THE PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE PROOF ROLLED AND INSPECTED FOR UNSUITABLE MATERIALS AND/OR EXCESSIVE MOVEMENT. THE SOILS ENGINEER SHALL CONDUCT AND THE VILLAGE SHALL WITNESS ALL PROOF ROLLS. IF UNSUITABLE SUBGRADE IS ENCOUNTERED, IT SHALL BE CORRECTED IN A MANNER APPROVED BY THE OWNER OR HIS REPRESENTATIVE. THIS MAY INCLUDE ONE OR MORE OF THE FOLLOWING METHODS:
 - 1) SCARIFY DISC AND AERATE.
 - 2) REMOVE AND REPLACE WITH STRUCTURAL CLAY FILL.
 - 3) REMOVE AND REPLACE WITH GRANULAR MATERIAL.
 - 4) USE OF GEOTEXTILE FABRIC.
 - C. PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE PAVEMENT AREA SHALL BE FINISHED TO WITHIN 0.04 FEET (1/2") OF FINAL SUBGRADE ELEVATION TO A POINT TWO (2) FEET BEYOND THE BACK OF CURB, SO AS TO INSURE THE PROPER THICKNESS OF PAVEMENT COURSES. NO CLAIMS FOR EXCESS QUANTITY OF BASE MATERIALS DUE TO IMPROPER SUBGRADE PREPARATION WILL BE HONORED.
 - D. PRIOR TO PLACEMENT OF THE BASE COURSE, ALL SUBGRADES MUST BE APPROVED BY THE MUNICIPAL ENGINEER, SOILS ENGINEER AND/OR OWNER.

CONCRETE WORK

- A. ALL EXTERIOR CONCRETE SHALL BE PORTLAND CEMENT CONCRETE CLASS S1 OR PV PER (SSRBC) SECTION 1020.04 WITH AIR ENTRAINMENT OF NOT LESS THAN FIVE (5%) OR MORE THAN EIGHT (8%) PERCENT. CONCRETE SHALL BE A MINIMUM OF SIX (6) HOURS SET AND SHALL DEVELOP A MINIMUM OF 3,500 PSI COMPRESSIVE STRENGTH AT FOURTEEN (14) DAYS. ALL CONCRETE SHALL BE BROOM FINISHED PERPENDICULAR TO THE DIRECTION OF TRAVEL. THE ADDITION OF CALCIUM CHLORIDE AND THE SUBSTITUTION OF 1% ASH FOR PORTLAND CEMENT IS PROHIBITED. 1.50 LBS OF COLLATED, FILLERATED, POLYPROPYLENE FIBER IN FIBERS 0.50 TO 0.75 INCHES IN LENGTH SHALL BE ADDED TO EACH CUBIC YARD OF CONCRETE USED FOR SIDEWALKS. THE FIBERS SHALL BE AS MANUFACTURED UNDER THE NAME "FIBERMESH" OR EQUAL.
 - B. CONCRETE CURB AND/OR COMBINATION CURB AND GUTTER SHALL BE OF THE TYPE SHOWN ON THE PLANS. THE CONTRACTOR IS CAUTIONED TO REFER TO THE CONSTRUCTION STANDARDS AND THE PAVEMENT CROSS-SECTION TO DETERMINE THE GUTTER FLAT THICKNESS AND THE AGGREGATE BASE COURSE THICKNESS BENEATH THE CURB AND GUTTER. PREMOLD FIBER EXPANSION JOINTS, WITH TWO 3/4" X 18" EPOXY COATED STEEL DONEL BARS, SHALL BE INSTALLED AT SIXTY (60) FOOT INTERVALS AND AT ALL POI-5; PT'S AND CURB RETURNS. ALTERNATE ENDS OF THE DONEL BARS SHALL BE CRIMPED AND FITTED WITH METAL EXPANSION TUBES, SAWED OR FORMED CONSTRUCTION JOINTS SHALL BE PROVIDED AT NO GREATER THAN FIFTEEN (15) FOOT INTERVALS BETWEEN EXPANSION JOINTS. NO HOEY-COMING OF THE CURB AND GUTTER WILL BE ACCEPTED.
 - C. CURBS SHALL BE DEPRESSED AT LOCATIONS WHERE PUBLIC WALKS/PEDESTRIAN PATHS INTERSECT CURB LINES, AND OTHER LOCATIONS AS DIRECTED FOR THE PURPOSE OF PROVIDING ACCESSIBILITY. (SEE CONSTRUCTION STANDARDS FOR DETAILS). BARRIER CURB SHALL ALSO BE DEPRESSED AT DRIVEWAY LOCATIONS.
 - D. THE CURBS SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION AND PRIOR TO THE PLACEMENT OF THE BASE COURSE. THE CONCRETE MUST CURE FOR AT LEAST SEVEN DAYS BEFORE THE CURBS ARE BACKFILLED.
 - E. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE SCORED JOINTS AT 5 FOOT INTERVALS AND 1/2" PREMOLD FIBER EXPANSION JOINTS AT 50 FOOT INTERVALS, AND ADJACENT TO CONCRETE CURBS, DRIVEWAYS, FOUNDATIONS, ETC.
 - F. CONCRETE DRIVEWAY APRONS SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. PROVIDE 6" X 6" NO. 6 WELDED WIRE MESH IN DRIVEWAYS. PROVIDE 1/2" PREMOLD FIBER EXPANSION JOINT ADJACENT TO CURBS AND CONCRETE SIDEWALKS. PROVIDE SAWED OR FORMED CONTRACTION JOINT AT MID-POINT AND 15 FOOT MAXIMUM.
 - G. STANDARD REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH THE ABOVE AND THE PLANS. SAWED OR FORMED CONTRACTION EXPANSION JOINTS SHALL BE AS SHOWN ON THE PLANS.
 - H. CONCRETE CURING AND PROTECTION SHALL BE IN ACCORDANCE WITH (SSRBC) - METHOD 1, II, OR III.
 - I. THE COST OF AGGREGATE BASE OR SUB-BASE UNDER CONCRETE WORK SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE CONCRETE ITEM.
4. FLEXIBLE PAVEMENT
- A. THE PAVEMENT MATERIALS FOR BITUMINOUS STREETS, PARKING LOTS, DRIVEWAYS, SIDEWALKS AND PATHS SHALL BE AS DETAILED ON THE PLANS. UNLESS OTHERWISE SHOWN ON THE PLANS, THE FLEXIBLE PAVEMENTS SHALL CONSIST OF AGGREGATE BASE COURSE, TYPE S1; BITUMINOUS CONCRETE BINDER COURSE; AND BITUMINOUS CONCRETE SURFACE COURSE OF THE THICKNESS AND MATERIALS SPECIFIED ON THE PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MAXIMUM COMPACTED THICKNESS. THE PAVING IS TO BE DONE IN ACCORD WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS.
 - B. ALL TRAFFIC SHALL BE KEPT OFF THE COMPLETED AGGREGATE BASE UNTIL THE BINDER COURSE IS LAID. THE AGGREGATE BASE SHALL BE UNIFORMLY PRIME COATED AT A RATE OF 0.4 TO 0.5 GALLONS PER SQUARE YARD PRIOR TO PLACING THE BINDER COURSE. PRIME COAT MATERIALS SHALL BE BITUMINOUS M.C. - 30.
 - C. PRIOR TO PLACEMENT OF THE SURFACE COURSE, THE BINDER COURSE SHALL BE CLEANED, AND TACK COATED IF DUSTY OR DIRTY. ALL DAMAGED AREAS IN THE BINDER, BASE OR CURB SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER PRIOR TO LAYING THE SURFACE COURSE. THE CONTRACTOR SHALL PROVIDE WATERWET EQUIPMENT AND MANPOWER NECESSARY, INCLUDING THE USE OF POWER BROOMS IF REQUIRED BY THE OWNER, TO PREPARE THE PAVEMENT FOR APPLICATION OF THE SURFACE COURSE. THE TACK COAT SHALL BE UNIFORMLY APPLIED TO THE BINDER COURSE AT A RATE OF 0.05 TO 0.10 GALLONS PER SQUARE YARD. TACK COAT SHALL BE AS SPECIFIED IN (SSRBC) SECTION 406.02.
 - D. SEAMS IN BASE, BINDER AND SURFACE COURSE SHALL BE STAGGERED A MINIMUM OF 6".
 - E. FOR NEW STREETS, THE CONTRACTOR SHALL PERMIT THE BITUMINOUS CONCRETE BINDER COURSE TO WEATHER ONE (1) WINTER SEASON PRIOR TO THE INSTALLATION OF THE BITUMINOUS CONCRETE SURFACE COURSE UNLESS OTHERWISE SPECIFIED BY THE MUNICIPAL ENGINEER OR OWNER.
5. TESTING AND FINAL ACCEPTANCE
- A. THE CONTRACTOR SHALL FOLLOW THE QUALITY CONTROL TESTING PROGRAM FOR CONCRETE AND PAVEMENT MATERIALS ESTABLISHED BY THE OWNER AND/OR MUNICIPALITY. TESTING SHALL BE DONE IN ACCORD WITH THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS AND THE TESTING REQUIREMENTS OF THE MUNICIPALITY.
 - B. WHEN REQUESTED BY THE OWNER, TEST RESULTS AND DOCUMENTATION FOR THE CONCRETE, BASE COURSE, BITUMINOUS CONCRETE BINDER, AND/OR SURFACE COURSE, SHALL BE SUBMITTED FOR VERIFICATION.
 - C. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED, FOR THE PURPOSE OF THICKNESS VERIFICATION.
 - D. WHEN REQUIRED BY THE OWNER OR MUNICIPALITY, THE CONTRACTOR SHALL OBTAIN SPECIMENS OF THE FULL DEPTH BITUMINOUS CONCRETE PAVEMENT STRUCTURE WITH A CORE DRILL WHERE DIRECTED, IN ORDER TO CONFIRM THE PLAN THICKNESS. DEFICIENCIES IN THICKNESS SHALL BE ADJUSTED FOR BY THE METHOD DESCRIBED IN (SSRBC), ART. 407.10.
 - E. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

WATERMAIN NOTES

1. PIPE MATERIALS:
- A. SEE VILLAGE OF MUNDELEIN SPECIFICATIONS THIS SHEET FOR PIPE MATERIAL SPECIFICATIONS.
2. FITTINGS:
- A. SEE VILLAGE OF MUNDELEIN SPECIFICATIONS THIS SHEET FOR FITTINGS SPECIFICATION.
3. WATER SERVICES:
- A. SEE VILLAGE OF MUNDELEIN SPECIFICATIONS THIS SHEET FOR WATER SERVICE SPECIFICATIONS.
4. VALVES:
- A. SEE VILLAGE OF MUNDELEIN SPECIFICATIONS THIS SHEET FOR VALVE SPECIFICATIONS.
5. VALVE VAULTS:
- A. VALVE VAULTS SHALL BE PRECAST CONCRETE STRUCTURES AS NOTED ON THE PLANS. THE FRAME AND LID SHALL BE NEENAH R-1712, OR EQUAL, WITH "WATER" EMBOSSED ON THE LID.
6. FIRE HYDRANTS:
- A. FIRE HYDRANTS SHALL CONFORM TO AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARD NO. C-502, LATEST REVISION, AND SHALL BE A MODEL SHOWN ON THE PLANS AND APPROVED BY THE MUNICIPALITY. FIRE HYDRANTS SHALL BE INSTALLED WITH AN AUXILIARY VALVE AND CAST IRON VALVE BOX. THE PUMPER CONNECTION SHALL FACE ROUNDLY.
 - B. PROVIDE THE RODS FROM THE MAINLINE TEE TO THE AUXILIARY VALVE, AND BETWEEN THE AUXILIARY VALVE AND HYDRANT BARGE. WRENDS NOT BOLTED TOGETHER.
 - C. THE BREAK FLANGE AND ALL BELOW GRADE FITTINGS SHALL HAVE STAINLESS STEEL NUTS AND BOLTS.
7. CORPORATION STOPS:
- A. CORPORATION STOPS SHALL BE BRONZE BODY KEY STOPS CONFORMING TO AWWA C-800, AND SHALL INCLUDE 1/4" BEND, TAIL PIECE, AND COMPRESSION FITTINGS. SIZE AND LOCATION AS SHOWN ON PLANS.
 - B. TAPPING SADDLES SPECIFICALLY DESIGNED FOR USE WITH PVC PIPE SHALL BE IN CONJUNCTION WITH THE CORPORATION STOP.
8. SERVICE BOX:
- A. PROVIDE CURB VALVE AND CURB BOX AS INDICATED ON THE PLANS. BOX SHALL BE EXTENSION TYPE WITH FOOT PIECE AND STATIONARY RODS FOR SIX (6) FEET OR BURY.
 - B. MAXIMUM DEFLECTION AT PIPE JOINTS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S CURRENT RECOMMENDATIONS AND AWWA SPECIFICATIONS.
9. BEDDING:
- A. ALL DUCTILE IRON WATERMAIN SHALL HAVE COARSE SAND BEDDING/EXTENDED TO AT LEAST SIX INCHES (6") ABOVE THE TOP OF THE PIPE. COST OF BEDDING SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THIS PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.
 - B. GRANULAR BEDDING MATERIAL OR GRANULAR BACKFILL MATERIAL SHALL BE CAREFULLY PLACED TO 12" OVER THE TOP OF THE PIPE BEFORE FINAL BACKFILLING AND COMPACTION.
 - C. A MINIMUM DEPTH OF COVER OF 5'-6" SHALL BE MAINTAINED OVER THE WATER LINES. THE MAXIMUM COVER SHALL BE EIGHT (8) FEET EXCEPT AT SPECIAL CROSSINGS.
 - D. CONCRETE THRUST BLOCKING SHALL BE INSTALLED ON WATERMAIN AT ALL BENDS, TEE, ELBOWS, ETC.

10. JEPA WATERMAIN PROTECTION:

- A. HORIZONTAL SEPARATION
- 1) WATERMANS SHALL BE LAID AT LEAST TEN FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER OR SEWER SERVICES CONNECTION.
 - 2) WATERMANS MAY BE LAID ALONGER THAN TEN FEET TO A SEWER LINE WHEN:
 - 1) LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN FEET;
 - 2) THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER;
 - 3) THE WATERMAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.
- B. VERTICAL SEPARATION
- 1) A WATERMAIN SHALL BE LAID SO THAT ITS INVERT IS 18 INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATERMANS CROSS STORM SEWERS, SANITARY SEWERS OR SEWER SERVICES CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAIN LOCATED WITHIN TEN FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSING. A LENGTH OF WATERMAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN. BOTH THE WATERMAIN AND SEWER SHALL BE CONSTRUCTED WITH PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN:
 - 1) IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED IN (a) ABOVE; OR
 - 2) THE WATERMAIN PASSES UNDER A SEWER OR DRAIN.
 - 2) A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAIN SHALL BE MAINTAINED WHERE A WATERMAIN CROSSES UNDER SEWER. SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLING AND BREAKING THE WATER MAIN.
 - 3) CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATERMAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN FEET.

11. TESTING:

- A. ALL WATERMANS SHALL BE PRESSURE TESTED, FLUSHED AND DISINFECTED IN ACCORDANCE WITH AWWA AND MUNICIPAL SPECIFICATIONS. EACH VALVE SECTION SHALL BE PRESSURE TESTED FOR A MINIMUM OF 4 HOURS ALLOWING LEAKAGE IS TO BE ONLY THAT WHICH IS PREDETERMINED BY THE STANDARD SPECIFICATIONS FOR SEWER AND WATERMAIN CONSTRUCTION IN ILLINOIS. AT NO TIME IS THERE TO BE ANY VISIBLE LEAKAGE FROM THE MAIN.
- B. CONTRACTOR IS RESPONSIBLE FOR PRESSURE TESTING AGAINST EXISTING WATER VALVES.

Miscellaneous Water Main Notes

Water Main

A. Water Main Pipe Materials

- PVC SDR 18 AWWA C-900 PVC Pipe
- Water main pipe must have a minimum of five (5)-feet six (6)-inches cover per the Trench Material Detail.

B. Restrained Joints

- 1. All mechanical joint fittings are to be restrained with mega-lugs produced by EBB&A Iron Inc. or approved equivalent. This shall be for C-900 PVC pipe or Class 52 Ductile Iron Pipe.
- 2. All mechanical joint fittings to be assembled with stainless steel Teflon coated nuts and bolts.
- 3. All mechanical joint fittings must contain two (2) zinc anode (6 ounce minimum) caps attached to every other foot of each fitting (see detail).

C. Tracer Wire

- 1. Tracer wire - 12 awg copper wire with 30-mil polyethylene jacket must be buried with all water main pipe materials including Ductile Iron Pipe.
- 2. Tracer wire must be "duct" taped to the top of water main pipe at intervals not to exceed four (4)-feet.
- 3. Tracer wire split bolt connectors required when connecting two (2) pieces together. Bare wire and connector must be wrapped with electrical tape must be taped over (see example for split bolt connector).
- 4. Tracer wire must be brought up to grade using the locating wire box at each fire hydrant (per detail).
- 5. Tracer wire must be brought to top step in valve vaults (per detail).

D. Fire Hydrants

A. Materials

- 1. The Fire Hydrant must be Mueller Super Centurion 250, A-423 Model.
- 2. The below grade nuts & bolts on the hydrant must be stainless steel installed from the manufacturer.
- 3. Water main "spool" pieces of pipe between the branch tee and the hydrant shoe must be made of ductile iron pipe material.
- 4. Fire hydrant tees must be installed in a horizontal position to the water main. Hydrant auxiliary valve boxes of excessive depth must have an extension on the valve operative nut to permit clear operation above the hydrant.

W-0
(1 of 4)

Construction Details
April 2005
Revised April 2008

B. Spacing and Locations

- 1. Fire hydrants shall be installed along all water mains constructed in public right-of-way, at a maximum spacing of 550-feet. However, fire hydrants must be installed on lot lines in single-family residential installations.
- 2. Fire hydrants must be at least 20-feet from any intersection.
- 3. Hydrants shall be installed no closer than three (3)-feet to the back of curb from the steamer port (pumper nozzle), nor further than eight (8)-feet from the back curb. No hydrant shall be installed within 48-inches of any obstruction, nor shall any obstruction be placed within 48-inches of an existing hydrant. A minimum five (5)-foot distance from any driveway entrance must be maintained.

C. Distance

Fire Department review required for distance from building.

D. Paintings

- 1. All hydrants shall be painted "Safety Red" with Sherwin-Williams brand "SHIR-CR1 SAFETY RED", Rustoleum brand "FIRE HYDRANT PAINT RED", or as approved by the Water Superintendent.

Valves

A. Materials

All water valves must be Mueller Brand (per detail).

B. Spacing and Location

Water main valves shall be spaced at a minimum of 400-feet, or at a distance such that in the event of a required shut down of the public main, no more than 24 single family residential units shall be out of water service, whichever results in the shortest valve spacing or as approved by the Public Works Department. Valve vaults shall not be allowed within driveways or sidewalks.

Connection to Existing Mains

All connections to the Village water distribution system shall be made under full water service pressure in accordance with Village Engineering Design Details or as required.

A. Materials

- 1. When connection is size on size piping, a two (2) piece Ductile Iron Sleeve is required.
- 2. When branch size is smaller than existing pipe, a stainless steel tapping sleeve will be used.
- 3. All tapping sleeves must be air tested prior to tapping water main. W-0 (2 of 4)

Construction Details
April 2005
Revised April 2008

Water Service Lines (Two (2)-Inches and Smaller)

A. Materials

- 1. A water service line is designed to deliver water from a public water distribution main from the main to a single building, and includes corporation stop, curb stop, and service box. Service lines shall be Type K copper and installed approximately at a right angle to the centerline of the right-of-way. Service lines shall be continuous with no splices between either the corporation and the curb stop or the curb stop and the water meter.
- 2. The water service tap will include a full circle stainless steel tapping sleeve (per Detail W-5).
- 3. All fittings will consist of a flare by flare connection.
- 4. The Contractor/ Developer will provide the following materials for service lines. Tapping sleeve, corporation stop, curb stop, service box, and copper (per Detail W-5)
- 5. Contractor/developer must complete all work related to the service lines.

B. Spacing and Locations

Service connections must maintain a three (3)-foot separation from any other service connection, pipe bell or fitting, valve vault, and/or fire hydrant.

C. Inspections Required

- 1. The Village of Mundelein Water Superintendent or his designate must witness the tap connection to water main. For taps on PVC water main, the contractor shall make the tap/connection using an approved tapping tool and shall provide the removed coupon to the Village Mundelein Water Division inspector. 24-hour advanced notice is required.
- 2. The Village of Mundelein Plumbing Inspector or his designate must inspect the service line from the corporation stop to the curb stop. 24 hour advance notice is required.
- 3. The Village of Mundelein Plumbing Inspector or his designate must inspect the service line from the curb stop to the water meter. 24 hour advance notice is required.

D. Special Notes

- 1. The water service line inside of building must have a minimum of 12 inches of Type K copper prior to the first fitting. The water meter must be set within 18-inches after entering the building.
- 2. The water service must enter the front side of a single family residential building upon which it services. W-0 (3 of 4)

Construction Details
April 2005
Revised April 2008

Water Service/Fire Lines (Larger Than Two (2)-Inches)

Water services that are larger than two (2)-inch Type K copper services shall be a minimum size of four (4)-inch water main pipe. (Three (3)-inch piping is not permitted.) These water services can be a combination system for both domestic use and fire protection.

A. Materials

Water service lines larger than two (2)-inches must follow all the materials, procedures, policies, and details for water main installations.

B. Fire Protection

Any water service line designated for fire protection must be sized appropriately in order to sufficiently supply water for fire protection based on the fire flow requirement of the building. Documentation must be submitted and approved by the Village of Mundelein Fire Department.

C. Combination Fire/Domestic Usage

Any water service line designated for both fire and domestic usage must meet the following requirements:

- 1. Water service line must be sized to meet the fire protection requirements and domestic usage of the building.
- 2. Water service line must enter the building in a designated Meter/Fire Suppression Room when domestic service is manifolded into multiple water meters. Meter/Fire Suppression Room must meet Village of Mundelein Code 16.08.260(f) meter rooms.
- 3. Upon entering the building or Meter/Fire Suppression Room, the domestic service will branch off from the fire service with valves installed on the fire line and domestic service prior to pressure testing.

D. Inspections and Testing

The inspections and testing of the water service for fire/domestic usage shall follow the guidelines and methods for water main inspections and testing procedures.

W-0
(4 of 4)

Construction Details
April 2005
Revised April 2008

NO.	DATE	REMARKS

PER VILLAGE COMMENTS	PER VILLAGE COMMENTS	REMARKS
04/04/14	9/17/13	

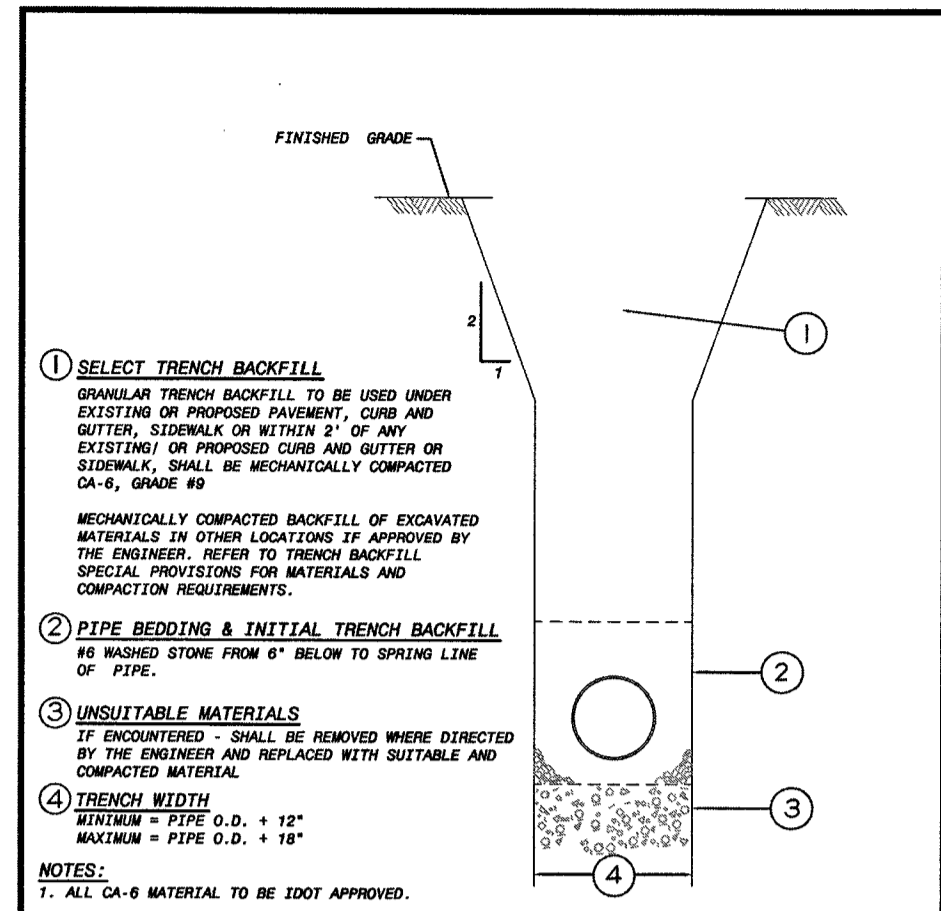
SPECIFICATIONS	CARDINAL SQUARE MUNDELEIN, ILLINOIS	SHEET S1 15 OF 20
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VANTAGE POINT
ENGINEERING

18311 NORTH CREEK DRIVE
TIMLEY PARK, IL 60477

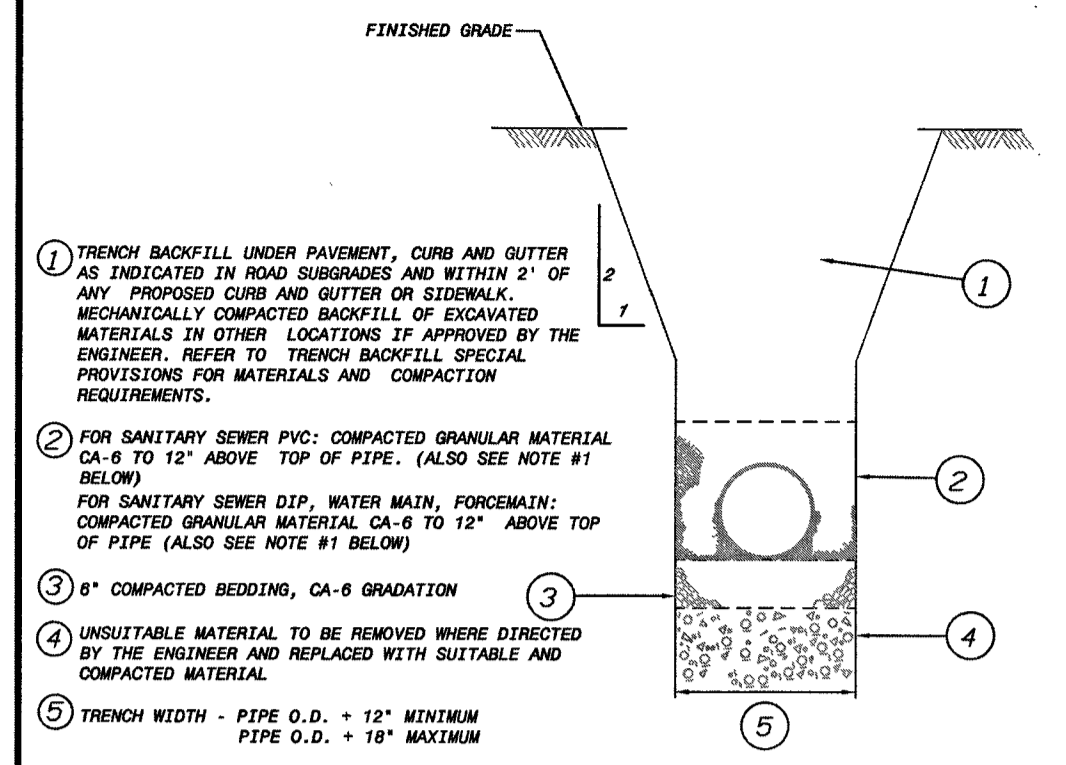
708.678.8006
INFO@VPENGINE.COM

VPEN@COM | CIVIL ENGINEERING | LAND PLANNING | SURVEYING



- SELECT TRENCH BACKFILL**
GRANULAR TRENCH BACKFILL TO BE USED UNDER EXISTING OR PROPOSED PAVEMENT, CURB AND GUTTER, SIDEWALK OR WITHIN 2' OF ANY EXISTING OR PROPOSED CURB AND GUTTER OR SIDEWALK, SHALL BE MECHANICALLY COMPACTED TO 95% RELATIVE DENSITY.
 - PIPE BEDDING & INITIAL TRENCH BACKFILL**
#6 WASHED STONE FROM 6" BELOW TO SPRING LINE OF PIPE.
 - UNSUITABLE MATERIALS**
IF ENCOUNTERED - SHALL BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE AND COMPACTED MATERIAL.
 - TRENCH WIDTH**
MINIMUM = PIPE O.D. + 12"
MAXIMUM = PIPE O.D. + 18"
- NOTES:
1. ALL CA-6 MATERIAL TO BE IDOT APPROVED.

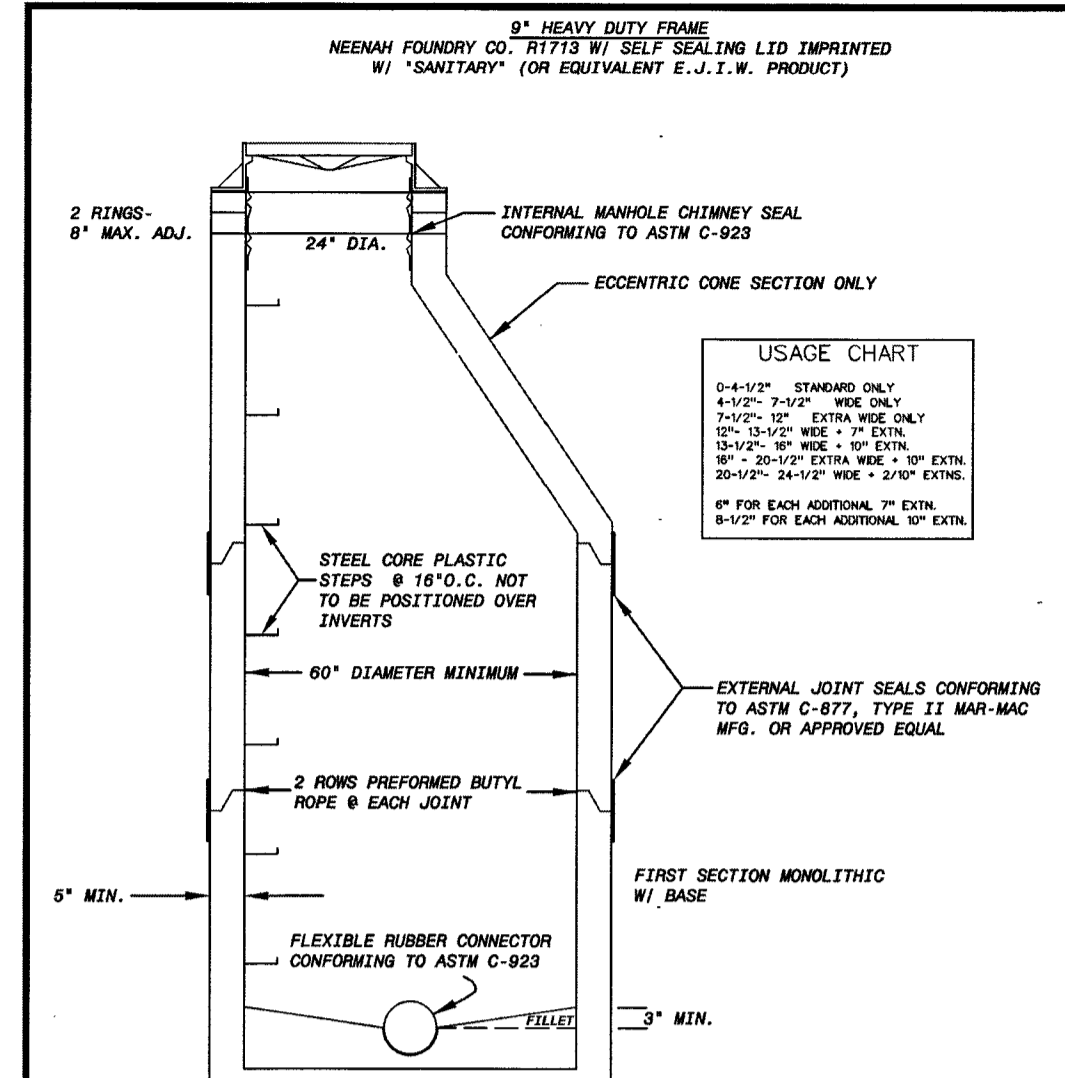
VILLAGE OF MUNDELEIN
ENGINEERING DETAILS
TYPICAL STORM SEWER TRENCH CROSS SECTION
DETAIL NO. ST-6



- TRENCH BACKFILL UNDER PAVEMENT, CURB AND GUTTER AS INDICATED IN ROAD SUBGRADES AND WITHIN 2' OF ANY PROPOSED CURB AND GUTTER OR SIDEWALK, MECHANICALLY COMPACTED BACKFILL OF EXCAVATED MATERIALS IN OTHER LOCATIONS IF APPROVED BY THE ENGINEER. REFER TO TRENCH BACKFILL SPECIAL PROVISIONS FOR MATERIALS AND COMPACTION REQUIREMENTS.
- FOR SANITARY SEWER PVC: COMPACTED GRANULAR MATERIAL CA-6 TO 12" ABOVE TOP OF PIPE. (ALSO SEE NOTE #1 BELOW)
- FOR SANITARY SEWER DTP, WATER MAIN, FORESLIM: COMPACTED GRANULAR MATERIAL CA-6 TO 12" ABOVE TOP OF PIPE (ALSO SEE NOTE #1 BELOW)
- UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE AND COMPACTED MATERIAL.
- TRENCH WIDTH - PIPE O.D. + 12" MINIMUM PIPE O.D. + 18" MAXIMUM

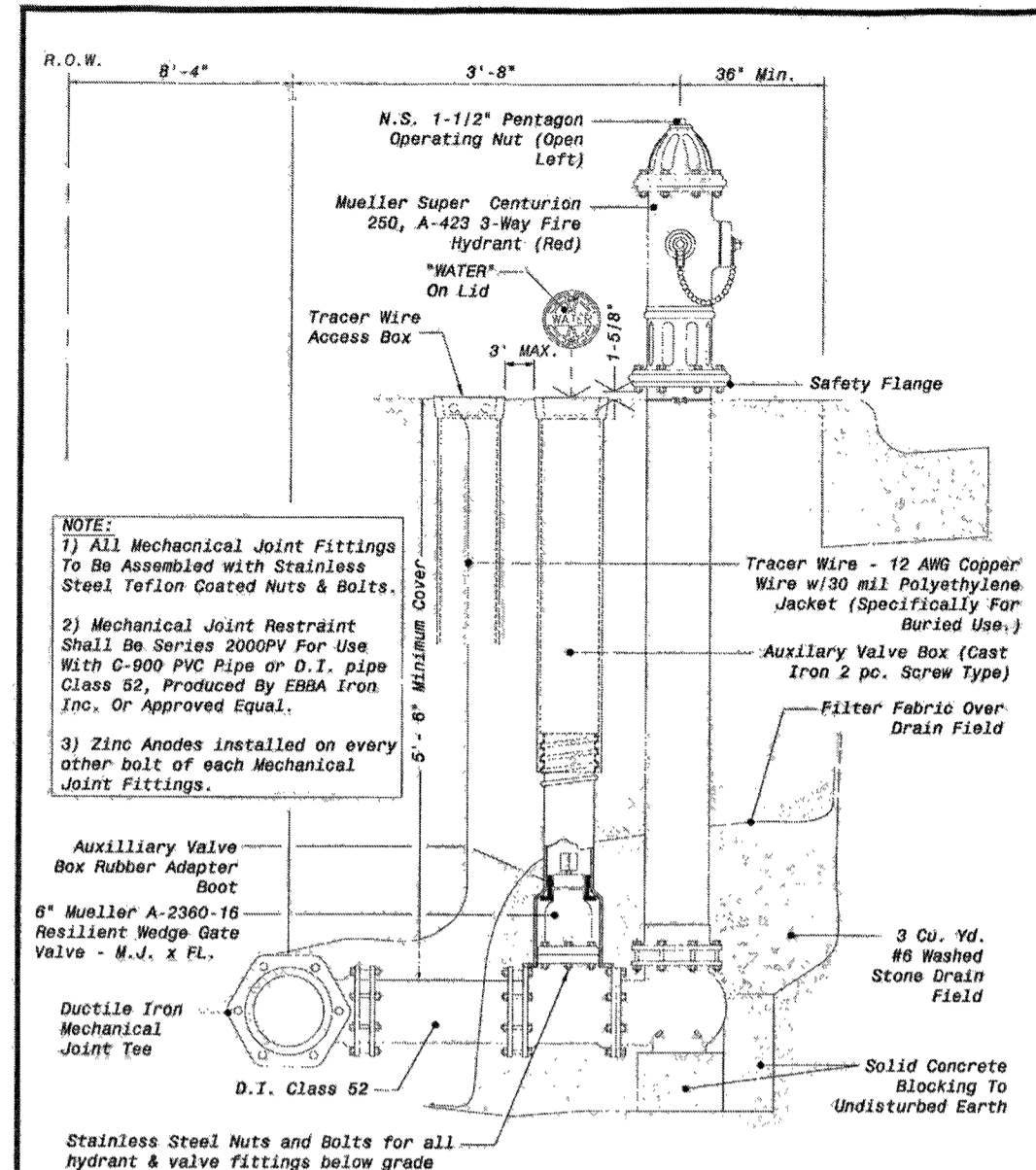
NOTES:
1. PVC PIPE CONFORMING TO THE SOR SPECIFIED IN THE PLANS SHALL BE INSTALLED TO THE LATEST REVISED SPECIFICATION REQUIREMENTS OF ASTM D2381 USING EITHER COMPACTED CLASS 1 OR CLASS 2 GRANULAR MATERIALS FOR BEDDING, HAUNCHING AND INITIAL BACKFILL OF 12" OVER THE TOP OF PIPE TO PROVIDE THE NECESSARY SUPPORT FOR THE PIPE SO THAT THE MAXIMUM DEFLECTION DOES NOT EXCEED 5% OF THE PIPE'S ORIGINAL INTERNAL DIAMETER.
2. ALL CA-6 MATERIAL TO BE IDOT APPROVED.

VILLAGE OF MUNDELEIN
ENGINEERING DETAILS
TYPICAL SANITARY TRENCH CROSS SECTION
DETAIL NO. SAN-1



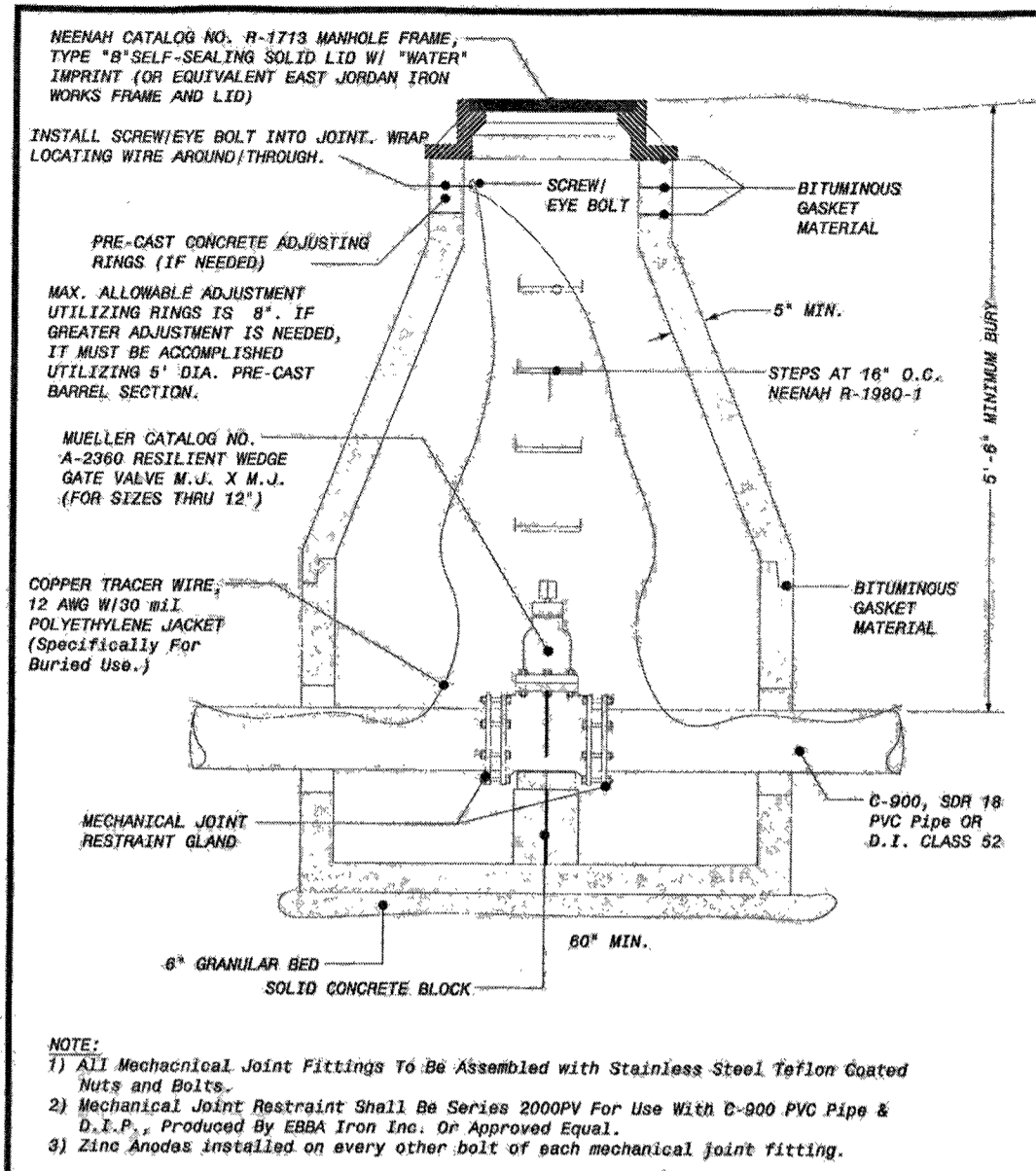
- 5" READY-DUTY FRAME
NEENAH FOUNDRY CO. RT715 W/ SELF SEALING LID IMPRINTED W/ "SANITARY" OR EQUIVALENT 2-I.I.W. PRODUCT
- INTERNAL MANHOLE CHIMNEY SEAL CONFORMING TO ASTM C-923
- ECCENTRIC CONE SECTION ONLY
- STEEL CORE PLASTIC STEPS @ 18" O.C. NOT TO BE POSITIONED OVER INVERTS
- 60" DIAMETER MINIMUM
- 2 ROWS PERFORMED BUTYL ROPE @ EACH JOINT
- EXTERNAL JOINT SEALS CONFORMING TO ASTM C-877, TYPE II MAR-MAC MFG. OR APPROVED EQUAL
- FIRST SECTION MONOLITHIC W/ BASE
- 3" MIN.
- 5" MIN.
- 8" MIN.
- 2 RIMS: 8" MAX. ADJ.
- 24" DIA.
- USAGE CHART:
4'-4 1/2" STEWARD ONLY
4'-2 1/2" - 14'2" WEE ONLY
14'-2 1/2" - 18' EXTRA WEE ONLY
18'-2 1/2" - 24' EXTRA WEE OR EXTRA
24'-2 1/2" - 30' EXTRA WEE OR EXTRA
30'-2 1/2" - 36' EXTRA WEE OR EXTRA
36'-2 1/2" - 42' EXTRA WEE OR EXTRA
42'-2 1/2" - 48' EXTRA WEE OR EXTRA
48'-2 1/2" - 54' EXTRA WEE OR EXTRA
54'-2 1/2" - 60' EXTRA WEE OR EXTRA

VILLAGE OF MUNDELEIN
ENGINEERING DETAILS
SANITARY MAN-HOLE TYPE 1
DETAIL NO. SAN-1



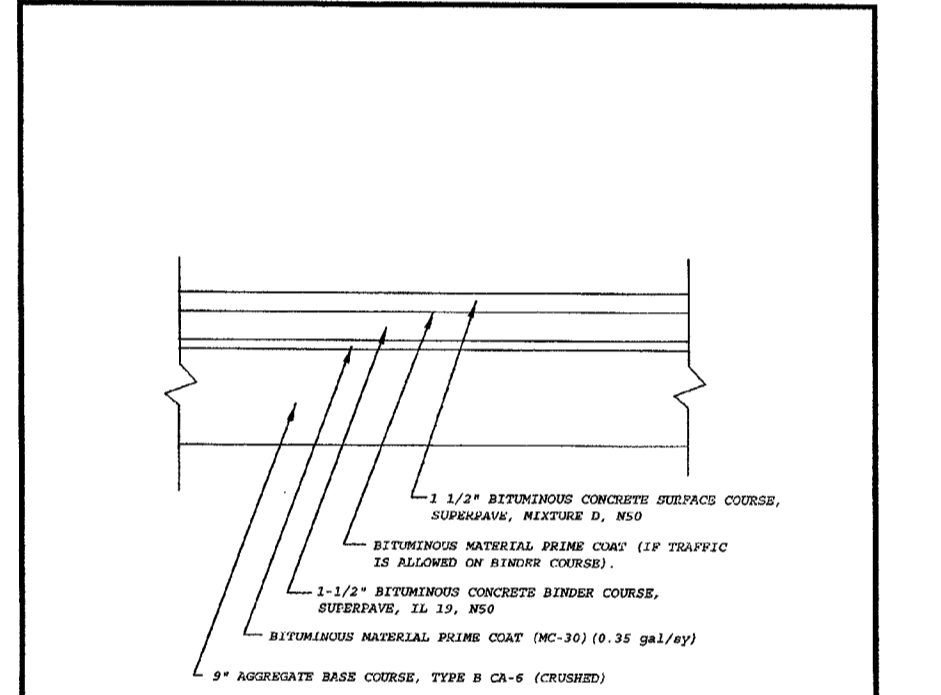
- NOTE:
1) All Mechanical Joint fittings to be assembled with stainless steel Teflon coated nuts and bolts.
2) Mechanical Joint Restraint shall be Series 3000PV for use with D-900 PVC pipe or D.I. pipe Class 52, produced by EBBA Iron Inc. or approved equal.
3) Zinc Anodes installed on every other bolt of each mechanical joint fitting.

VILLAGE OF MUNDELEIN
CONSTRUCTION DETAILS
TYPICAL FIRE HYDRANT
DETAIL NO. W-1



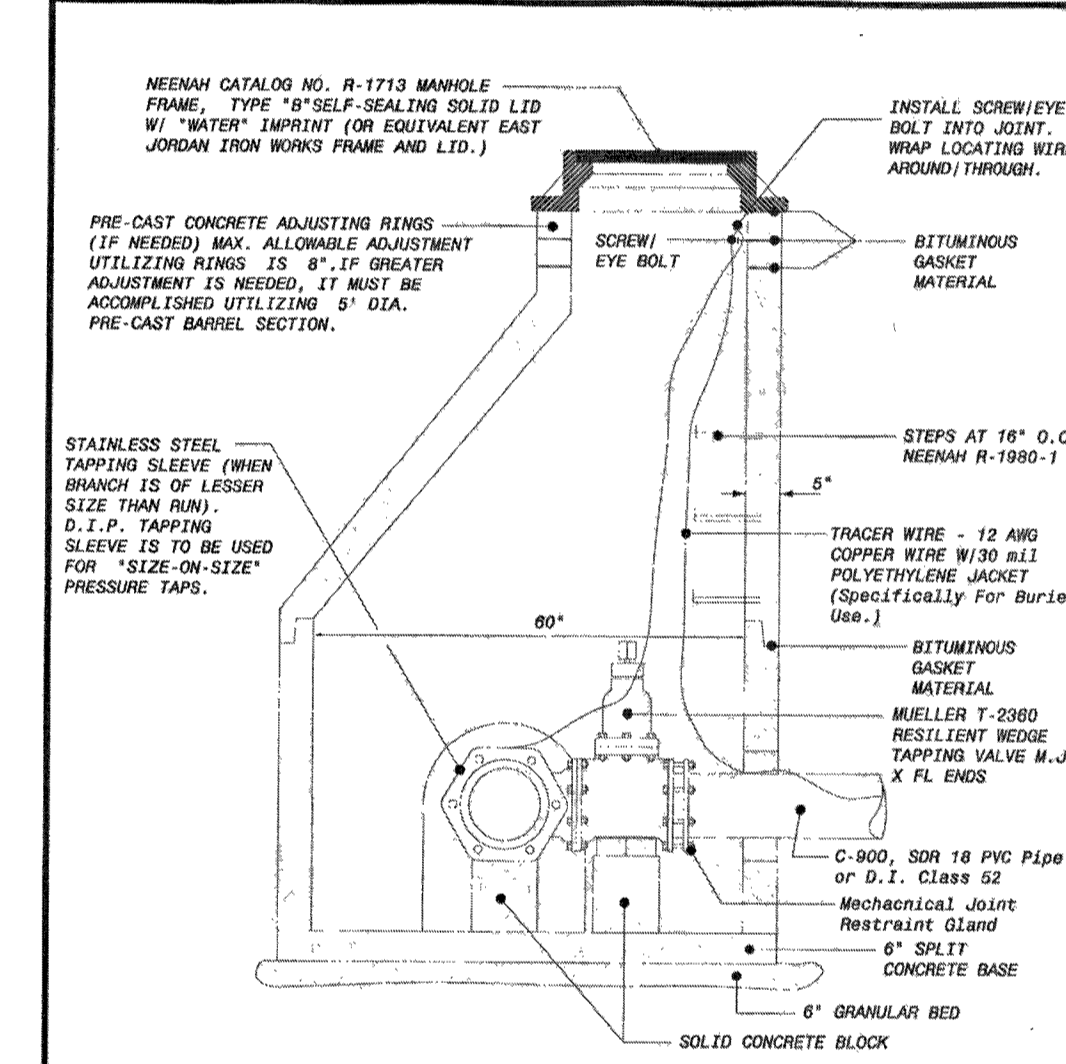
- NOTE:
1) All Mechanical Joint fittings to be assembled with stainless steel Teflon coated nuts and bolts.
2) Mechanical Joint Restraint shall be Series 3000PV for use with D-900 PVC pipe & D.I.P., produced by EBBA Iron Inc. or approved equal.
3) Zinc Anodes installed on every other bolt of each mechanical joint fitting.

VILLAGE OF MUNDELEIN
CONSTRUCTION DETAILS
TYPICAL VALVE VAULT (5' I.D.)
DETAIL NO. W-2



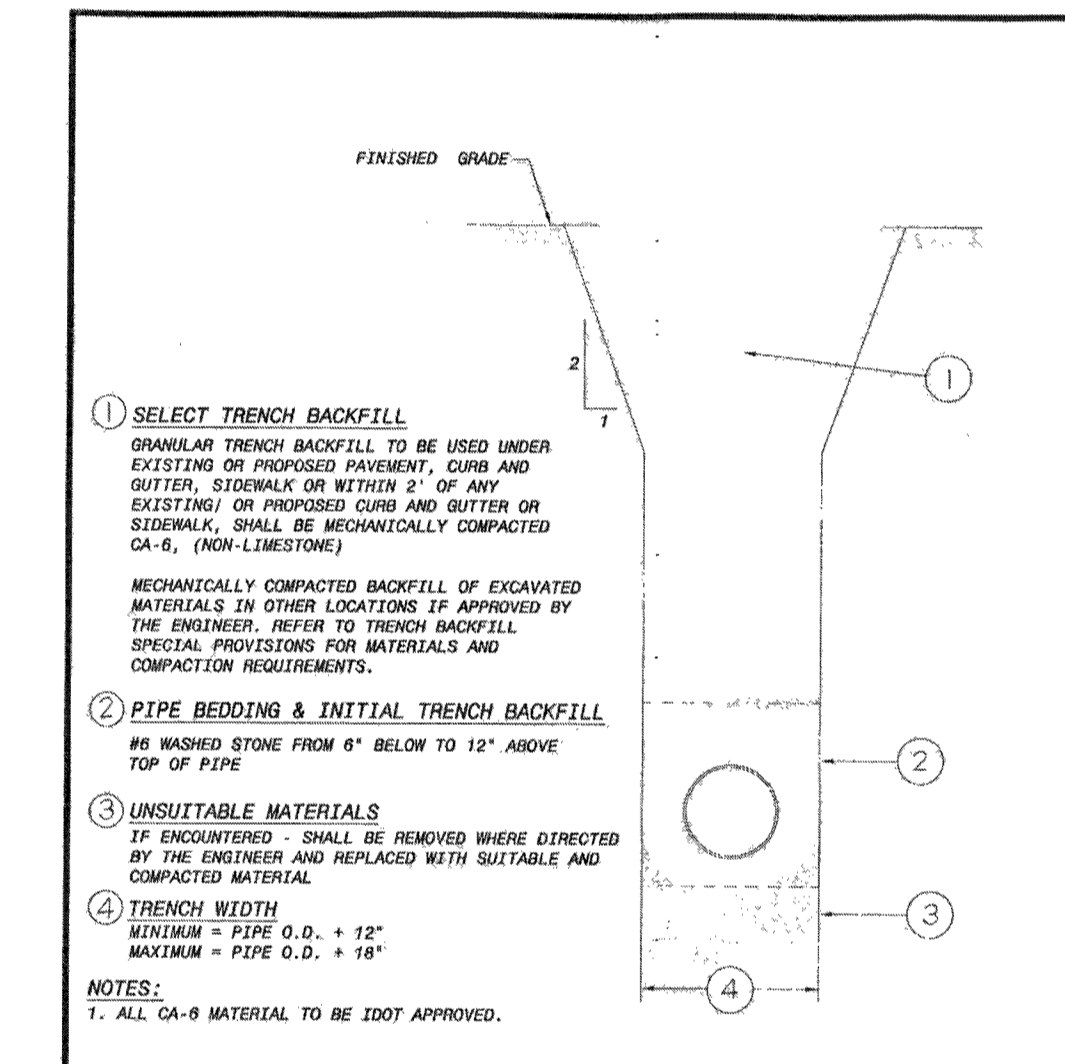
- NOTE:
1) 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, H.M.A., MIXTURE D NSO
2) 2" BITUMINOUS CONCRETE BINDER COURSE, H.M.A. II-19 NSO
3) 9 1/2" AGGREGATE BASE COURSE, TYPE B CA-6 (CRUSHED), H.M.A. WITH 4" GRANULAR MATERIAL SUBBASE MAY BE USED IN LIEU OF 9 1/2" OF AGGREGATE
4) TOPSOIL FURNISH AND PLACE 4" (MIN.) AND SEEDING.
5) COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12.
6) P.C.C. SIDEWALK 5" THICKNESS (6" THICKNESS AT DRIVEWAYS)

VILLAGE OF MUNDELEIN
ENGINEERING DETAILS
PARKING LOT TYPICAL PAVEMENT SECTION
DETAIL NO. R-2



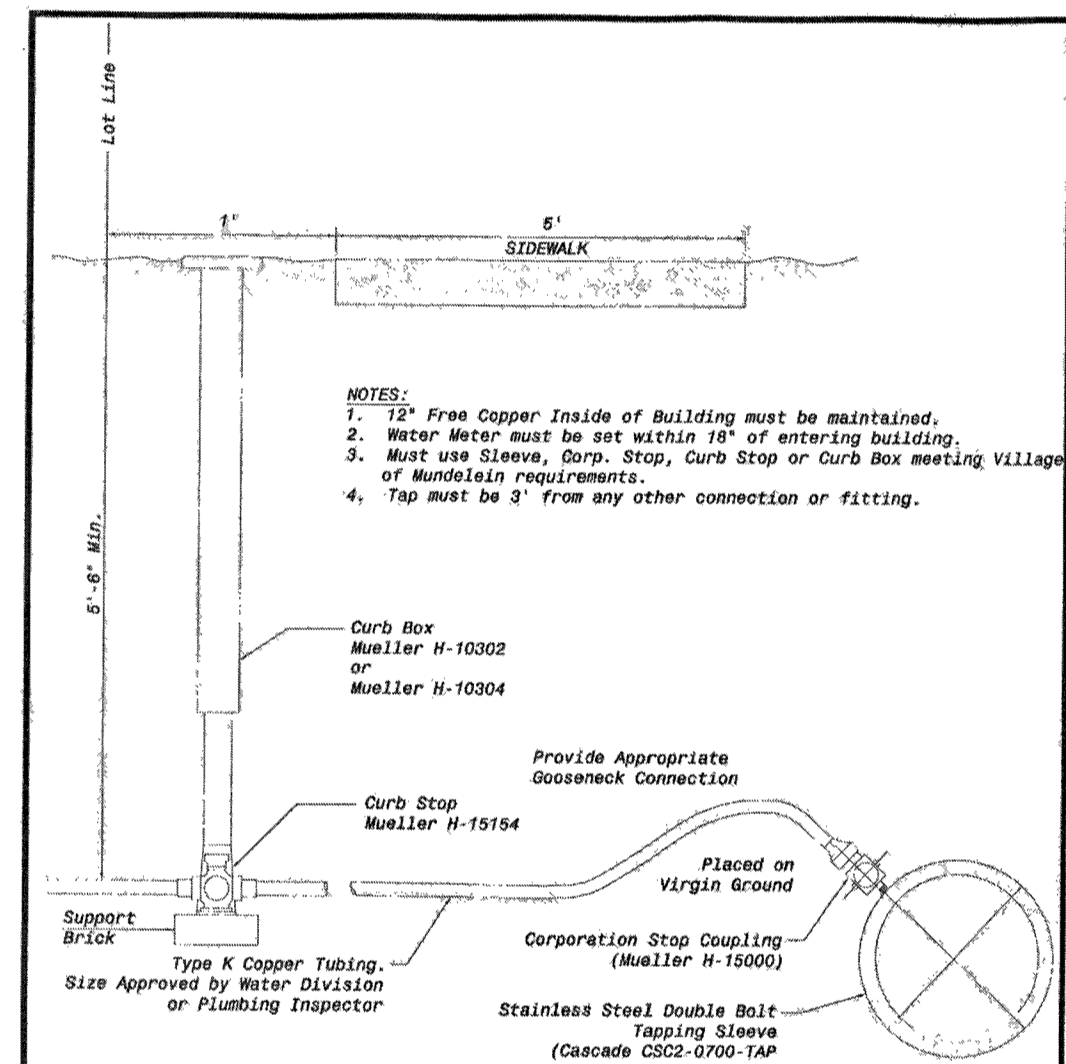
- SELECT TRENCH BACKFILL**
GRANULAR TRENCH BACKFILL TO BE USED UNDER EXISTING OR PROPOSED PAVEMENT, CURB AND GUTTER, SIDEWALK OR WITHIN 2' OF ANY EXISTING OR PROPOSED CURB AND GUTTER OR SIDEWALK, SHALL BE MECHANICALLY COMPACTED TO 95% RELATIVE DENSITY.
 - PIPE BEDDING & INITIAL TRENCH BACKFILL**
#6 WASHED STONE FROM 6" BELOW TO 12" ABOVE TOP OF PIPE
 - UNSUITABLE MATERIALS**
IF ENCOUNTERED - SHALL BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE AND COMPACTED MATERIAL.
 - TRENCH WIDTH**
MINIMUM = PIPE O.D. + 12"
MAXIMUM = PIPE O.D. + 18"
- NOTE:
1. ALL CA-6 MATERIAL TO BE IDOT APPROVED.

VILLAGE OF MUNDELEIN
CONSTRUCTION DETAILS
WATERMAIN PRESSURE CONNECTION TAPPING VALVE 10" & SMALLER
DETAIL NO. W-3



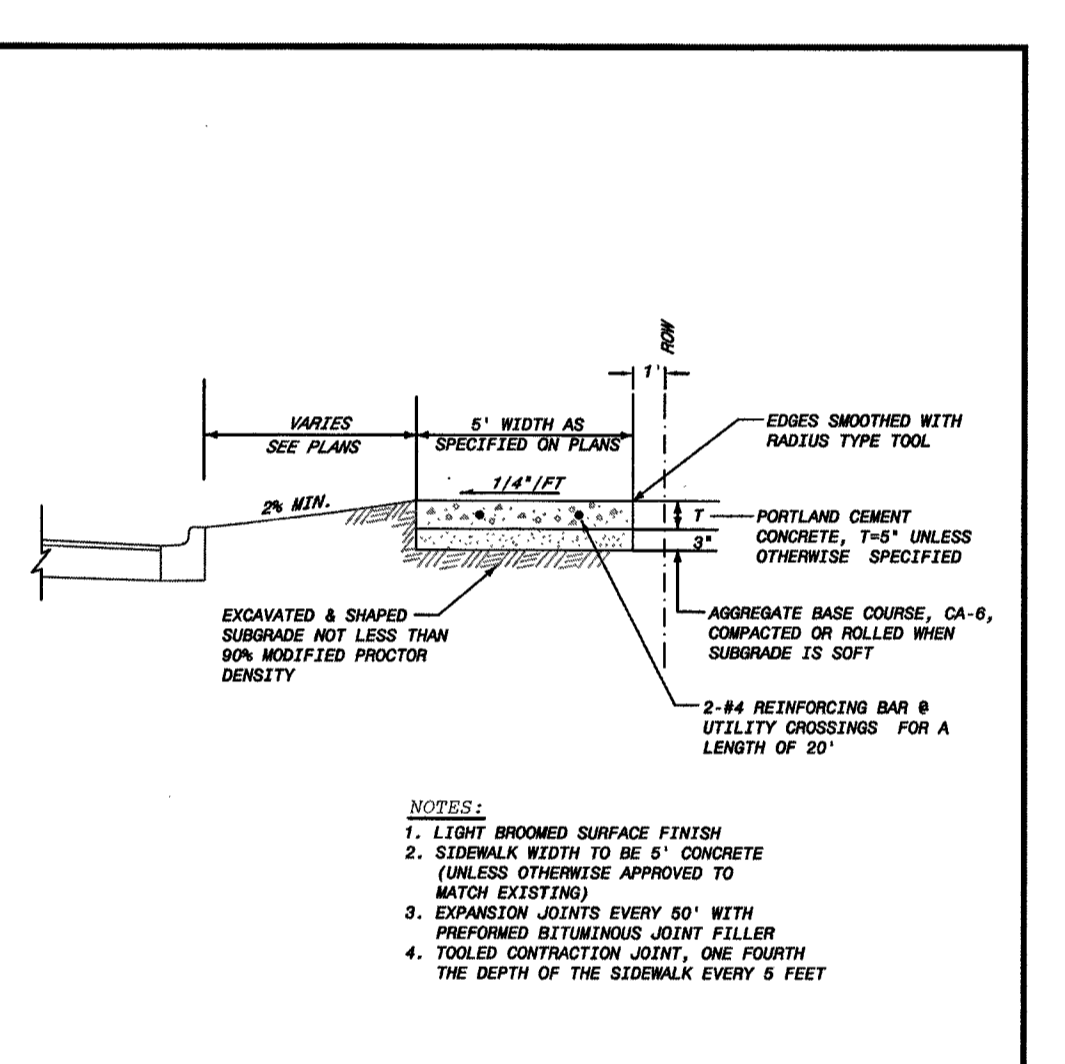
- SELECT TRENCH BACKFILL**
GRANULAR TRENCH BACKFILL TO BE USED UNDER EXISTING OR PROPOSED PAVEMENT, CURB AND GUTTER, SIDEWALK OR WITHIN 2' OF ANY EXISTING OR PROPOSED CURB AND GUTTER OR SIDEWALK, SHALL BE MECHANICALLY COMPACTED TO 95% RELATIVE DENSITY.
 - PIPE BEDDING & INITIAL TRENCH BACKFILL**
#6 WASHED STONE FROM 6" BELOW TO 12" ABOVE TOP OF PIPE
 - UNSUITABLE MATERIALS**
IF ENCOUNTERED - SHALL BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE AND COMPACTED MATERIAL.
 - TRENCH WIDTH**
MINIMUM = PIPE O.D. + 12"
MAXIMUM = PIPE O.D. + 18"
- NOTE:
1. ALL CA-6 MATERIAL TO BE IDOT APPROVED.

VILLAGE OF MUNDELEIN
CONSTRUCTION DETAILS
TYPICAL WATERMAIN TRENCH CROSS SECTION
DETAIL NO. W-4



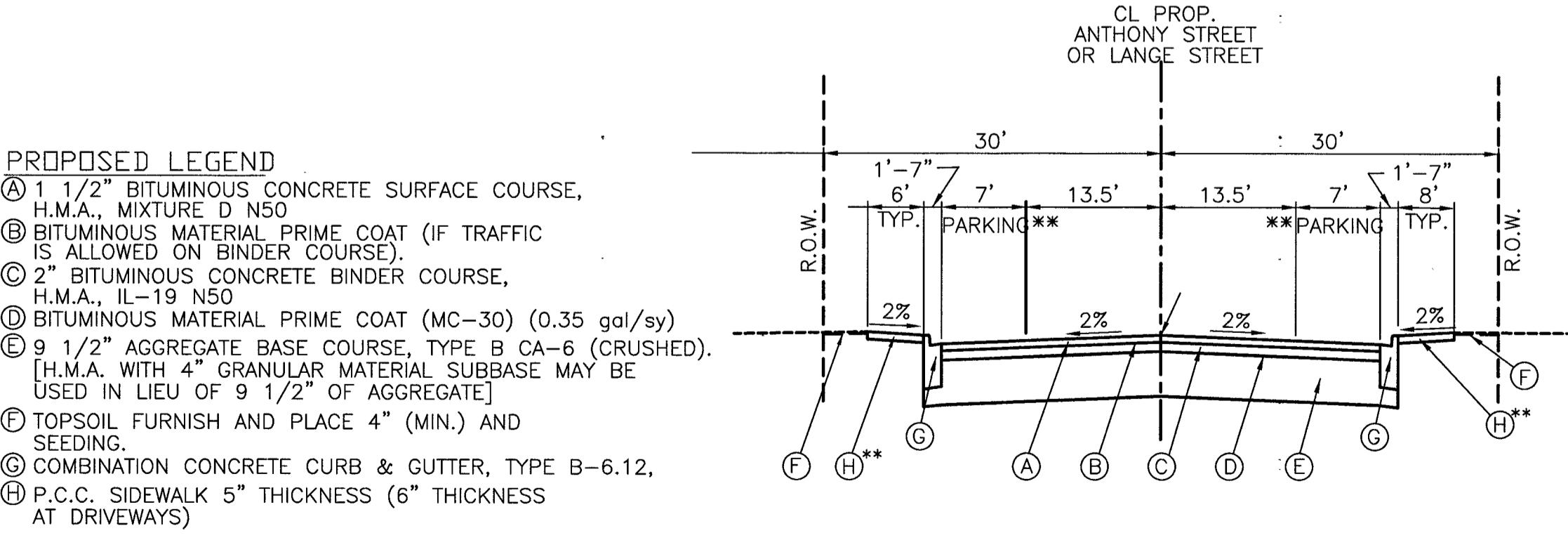
- NOTE:
1. 12" Free Copper inside of building must be maintained.
2. Water Meter must be set within 18" of entering building.
3. Must use Sleeve, Corp. Stop, Corp Stop or Corp Box meeting Village of Mundelein requirements.
4. Tap must be 3' from any other connection or fitting.

VILLAGE OF MUNDELEIN
CONSTRUCTION DETAILS
WATER SERVICE CONNECTION
DETAIL NO. W-5



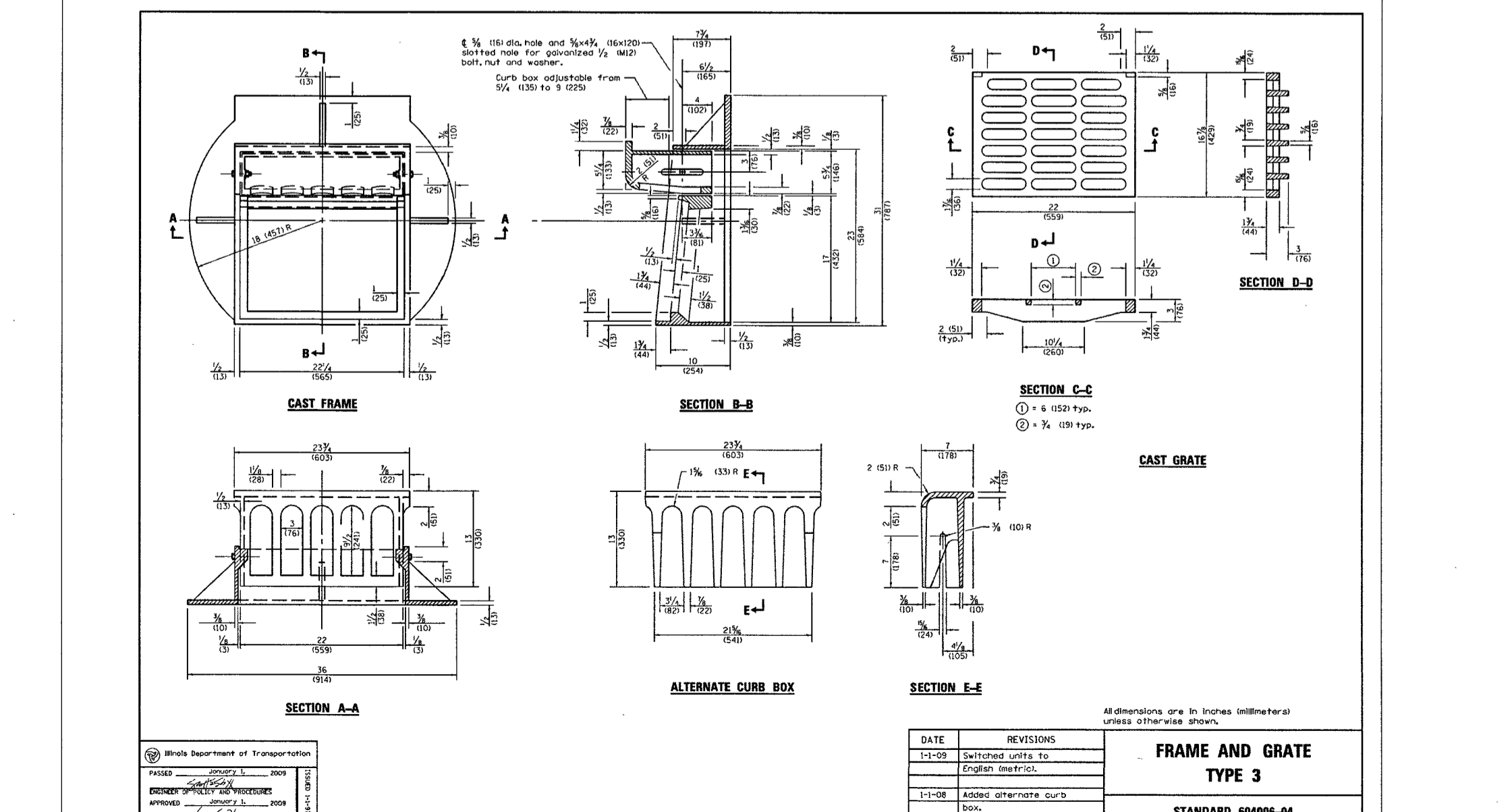
- NOTE:
1. TOP SURFACE FINISH
2. SIDEWALK WIDTH TO BE 5' CONCRETE (UNLESS OTHERWISE APPROVED TO MATCH EXISTING)
3. EXPANSION JOINTS EVERY 80' WITH PREFORMED BITUMINOUS JOINT FILLER
4. TOOLED CONTRACTION JOINT, ONE FOURTH THE DEPTH OF THE SIDEWALK EVERY 8 FEET

VILLAGE OF MUNDELEIN
ENGINEERING DETAILS
SIDEWALK DETAIL
DETAIL NO. R-4



- CL PROP. ANTHONY STREET OR LANGE STREET
- PROPOSED LEGEND:
 (A) 1 1/2" BITUMINOUS CONCRETE SURFACE COURSE, H.M.A., MIXTURE D NSO
 (B) BITUMINOUS MATERIAL PRIME COAT (IF TRAFFIC IS ALLOWED ON BINDER COURSE)
 (C) 2" BITUMINOUS CONCRETE BINDER COURSE, H.M.A. II-19 NSO
 (D) BITUMINOUS MATERIAL PRIME COAT (MC-30) (0.35 gal/sy) H.M.A. II-19 NSO
 (E) 9 1/2" AGGREGATE BASE COURSE, TYPE B CA-6 (CRUSHED), H.M.A. WITH 4" GRANULAR MATERIAL SUBBASE MAY BE USED IN LIEU OF 9 1/2" OF AGGREGATE
 (F) TOPSOIL FURNISH AND PLACE 4" (MIN.) AND SEEDING.
 (G) COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12.
 (H) P.C.C. SIDEWALK 5" THICKNESS (6" THICKNESS AT DRIVEWAYS)

PROPOSED ANTHONY STREET AND LANGE STREET TYPICAL SECTION
** SEE PLANS FOR LOCATIONS OF PARKING AND SIDEWALKS



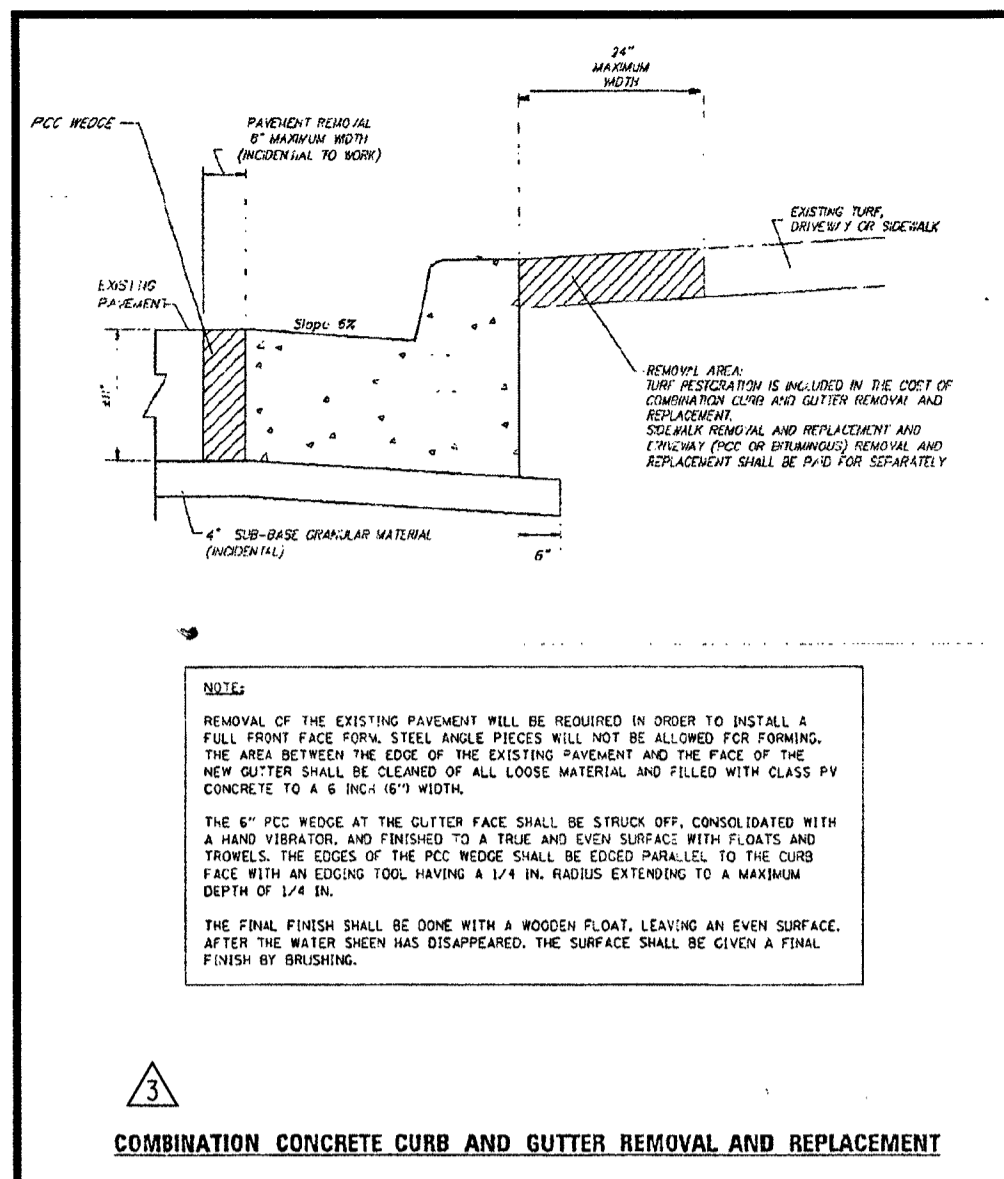
- DATE: 11-11-08
 DRAWN BY: J. J. JENSEN
 CHECKED BY: J. J. JENSEN
 APPROVED BY: J. J. JENSEN
- FRAME AND GRATE TYPE 3
STANDARD 60400-04

VANTAGEPOINT ENGINEERING
18311 NORTH CREEK DRIVE
TINLEY PARK, IL 60477
708.478.4004
INFO@VPENGINEERING.COM
VPENGINEERING.COM | CIVIL ENGINEERING | LAND PLANNING | SURVEYING

DETAILS - 1
CARDINAL SQUARE
MUNDELEIN, ILLINOIS

NO. DATE REMARKS
 4 04/04/14 PER VILLAGE COMMENTS
 1 9/17/13 PER VILLAGE COMMENTS

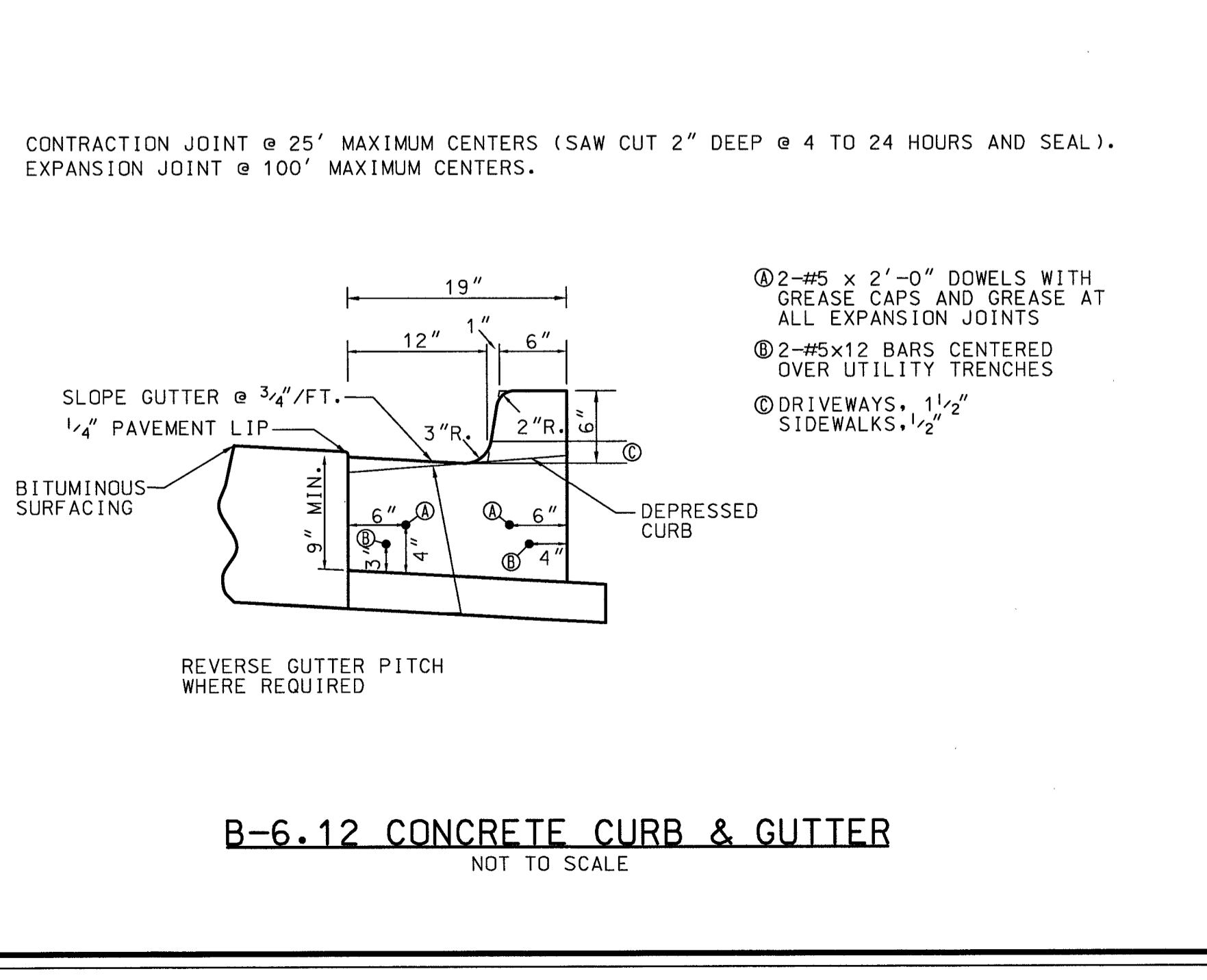
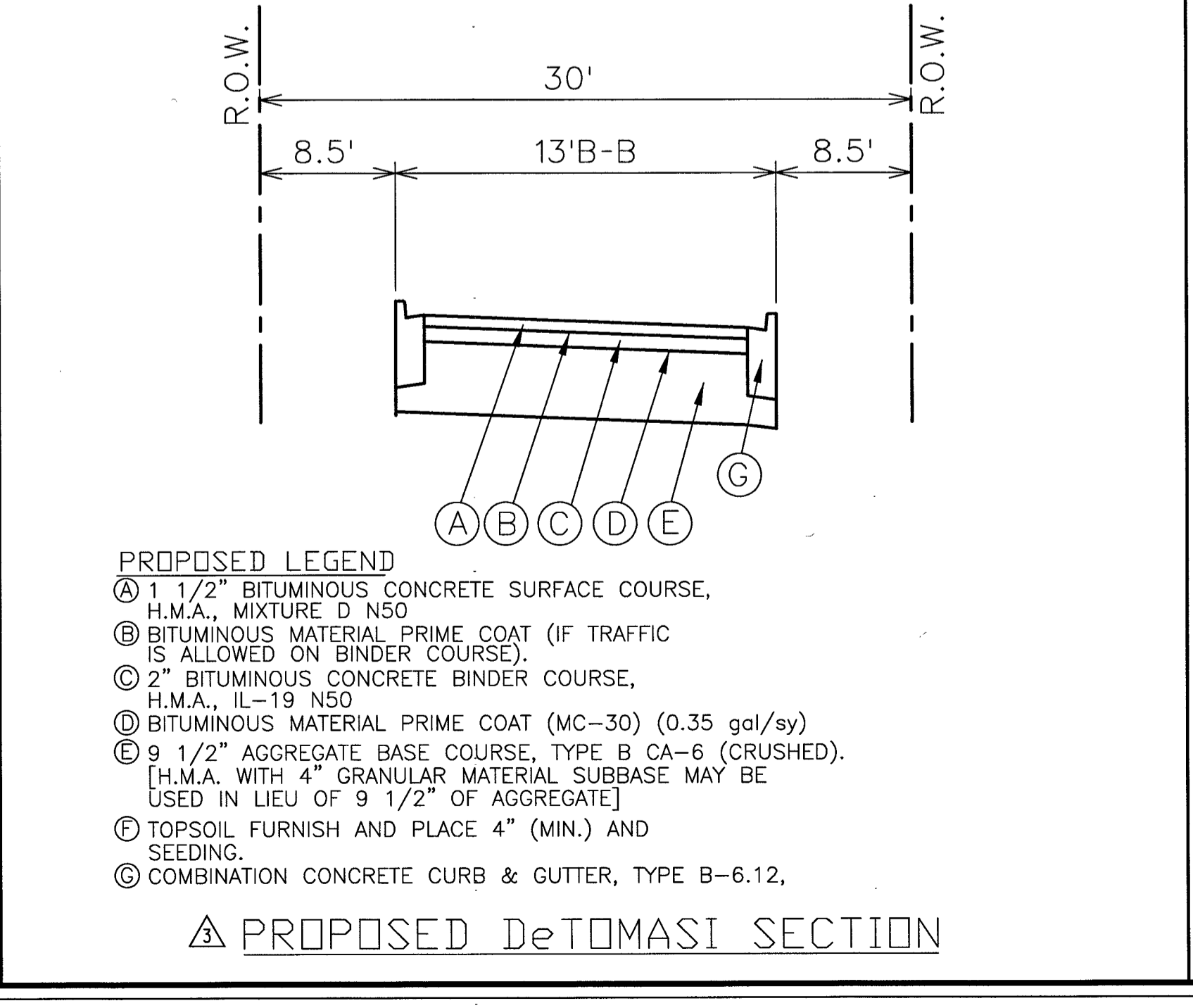
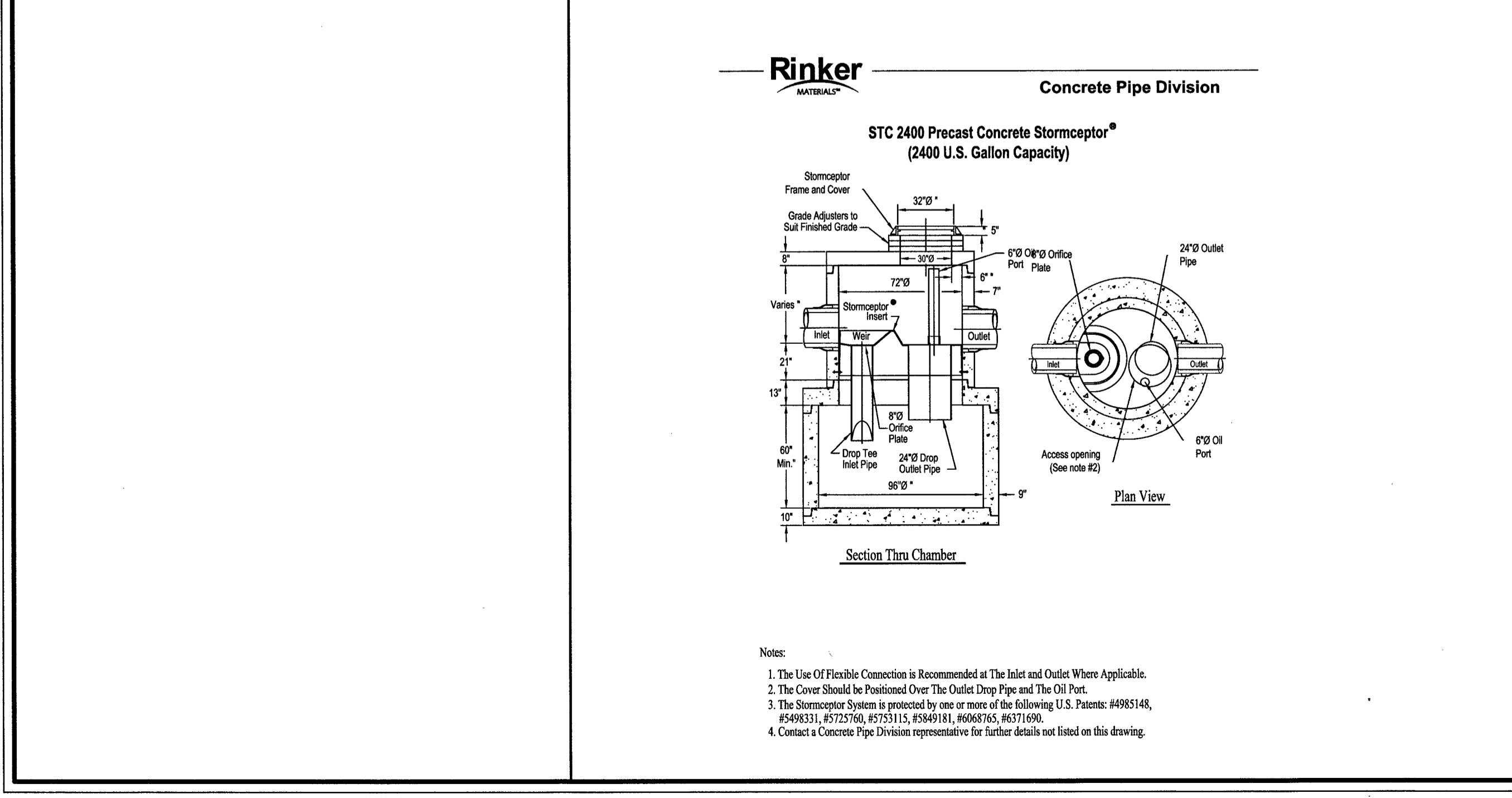
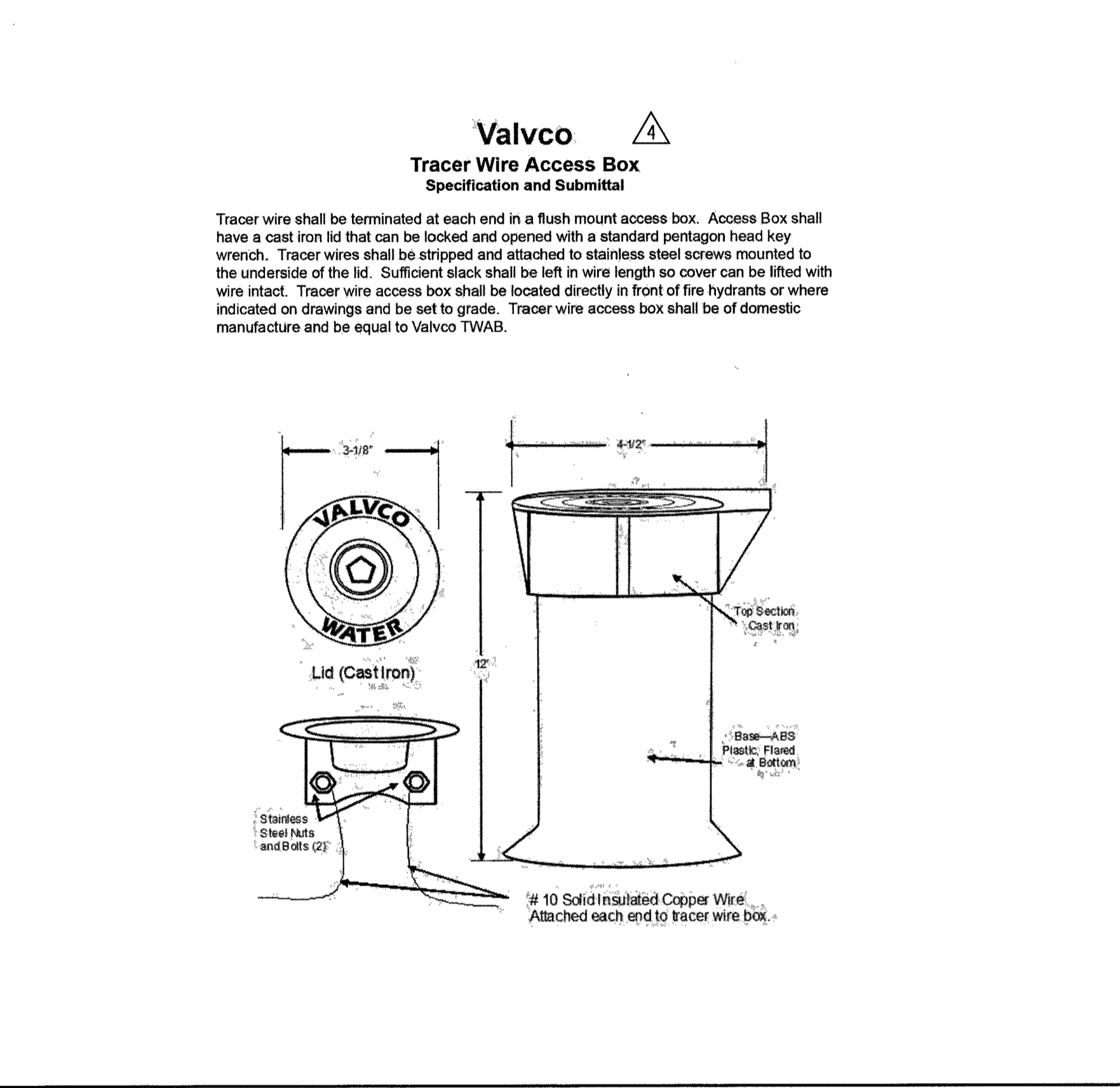
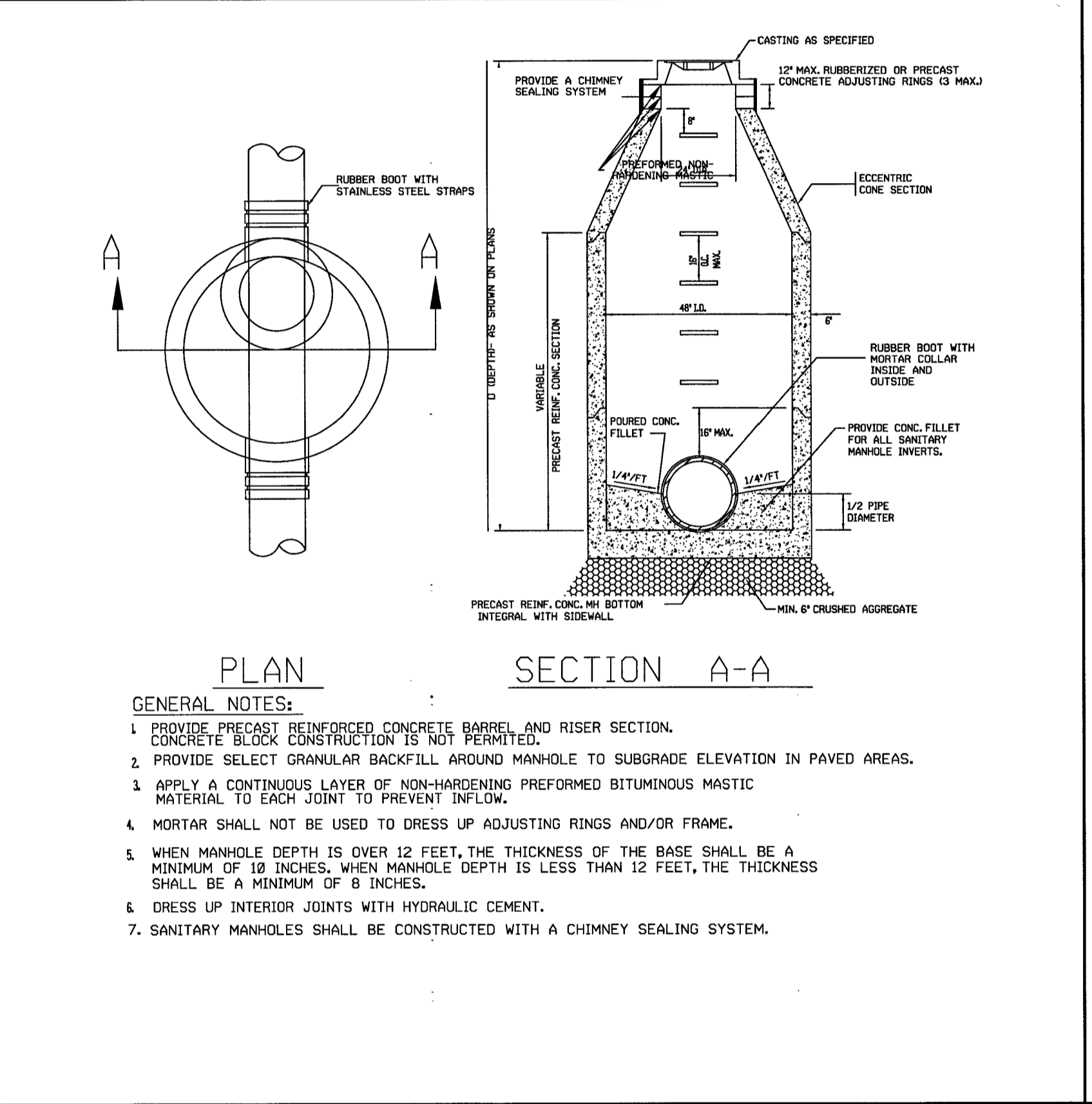
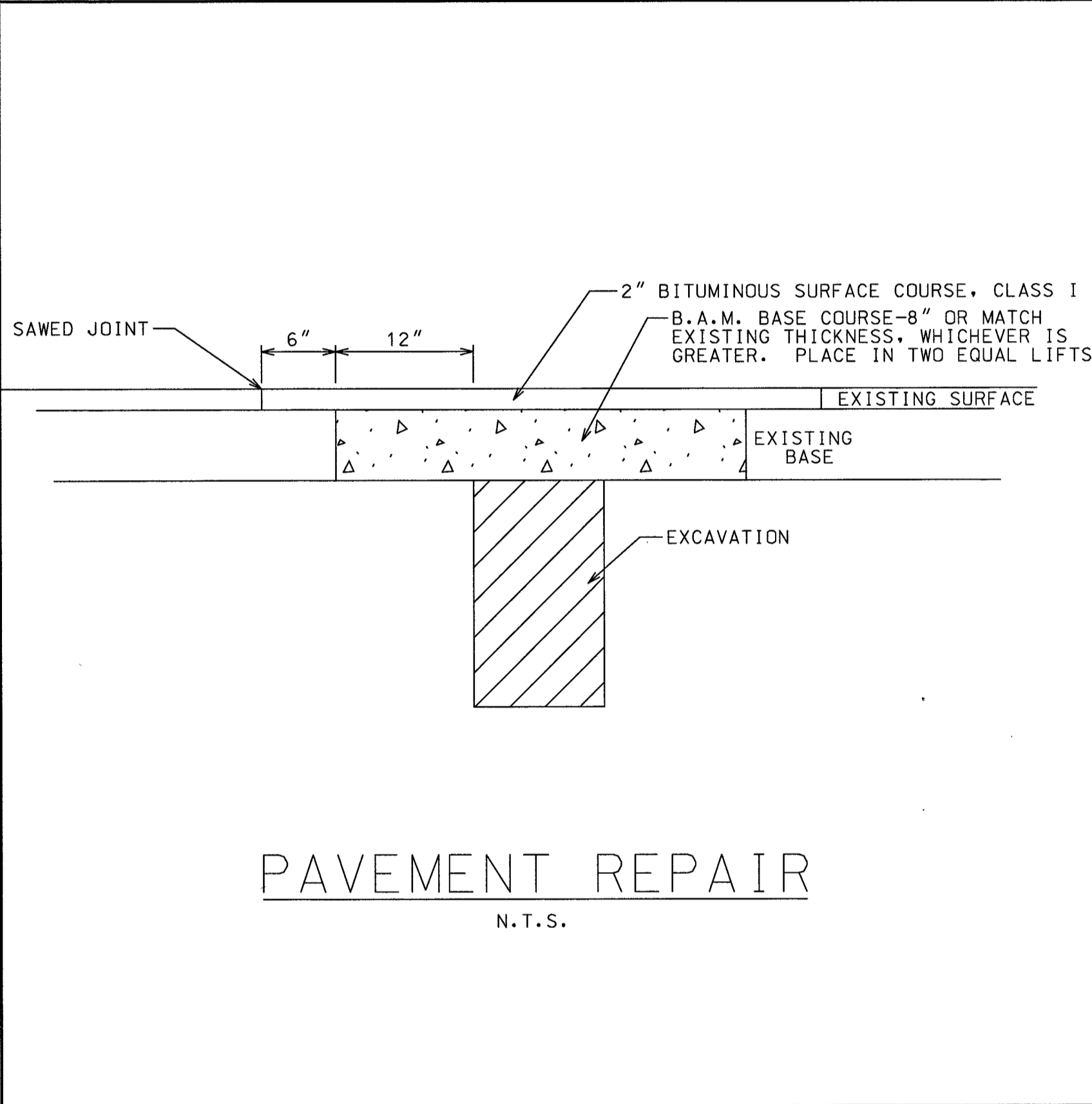
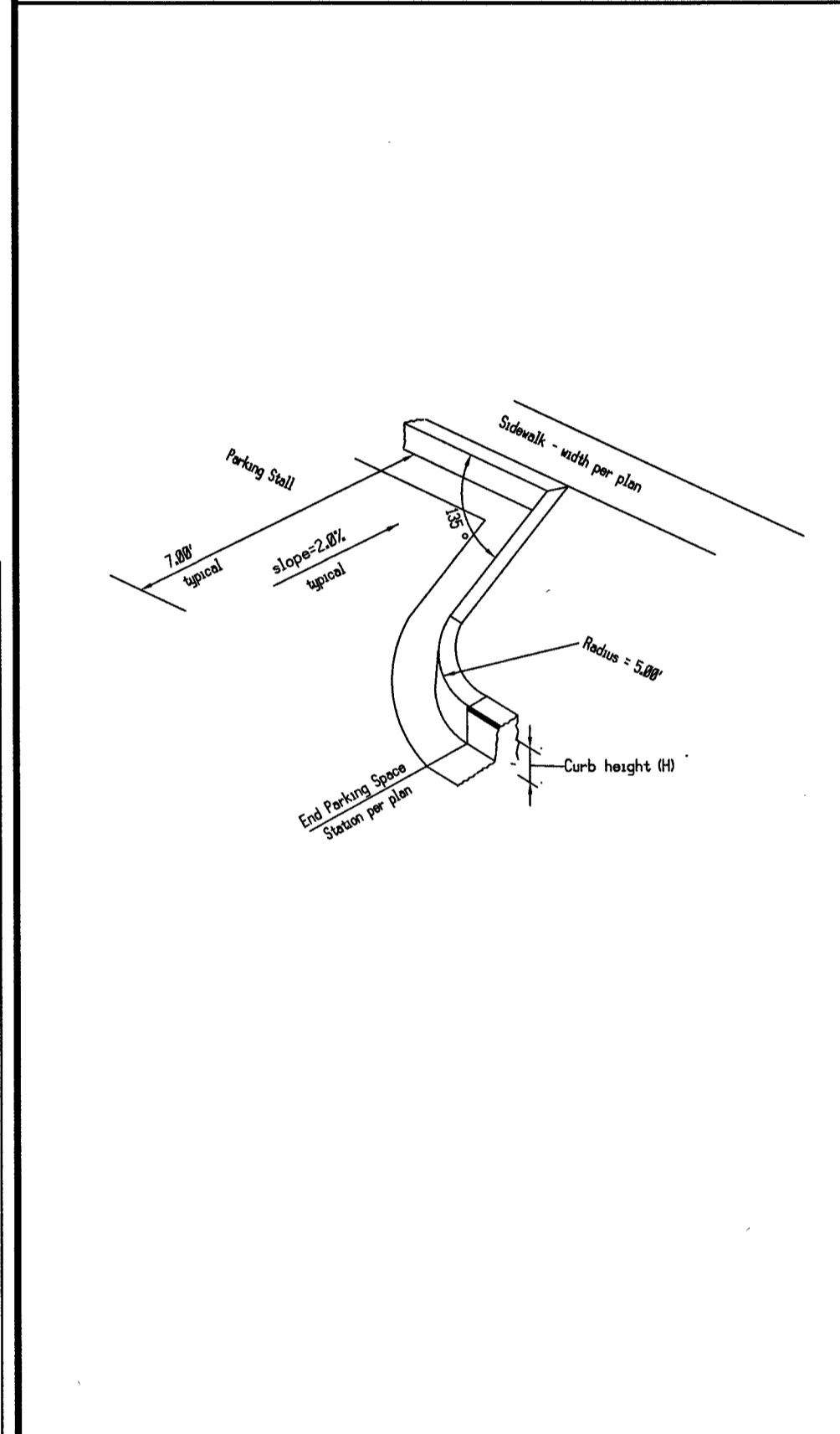
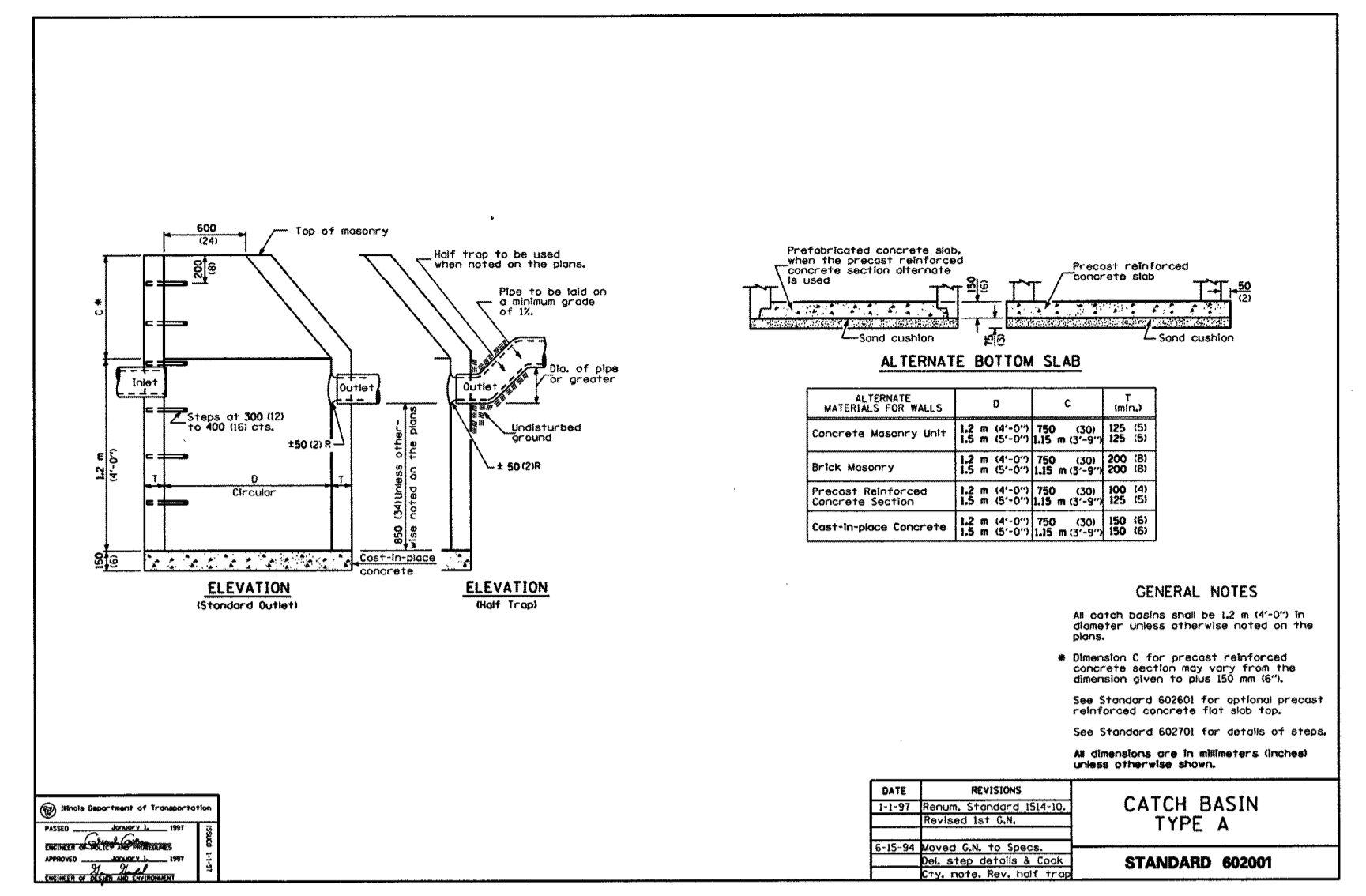
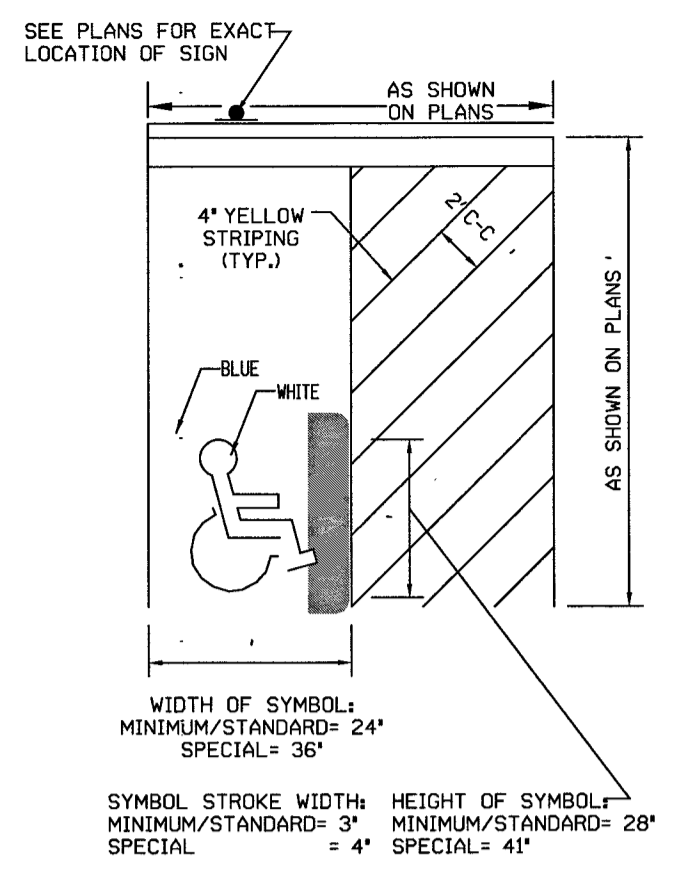
SHEET D1
16 OF 20



Copperhead Tracer Wire Specification:

Locator Wire for Pipeline, Direct bury, and Open Cut

Tracer wire for open cut/open ditch shall be a #12 AWG HS-CCS high-strength copper clad steel conductor (HS-CCS), insulated with a 30 mil, high-density, high molecular weight polyethylene (HDPE) insulation, and rated for direct burial use at 30 volts. HS-CCS conductor must be at 21% conductivity for locate purposes, break load 380 lbs. minimum. HDPE insulation shall be RoHS compliant and utilize virgin grade material. Insulation color shall meet the APWA color code standard for identification of buried utilities. Manufacturers supplying copper clad steel tracer wire must have available detailed performance data including 5 years of underground testing in terms of durability related to damage of protective insulation and effects of potential corrosion of the specific copper clad steel used. Origin of copper clad steel manufacturer is required and steel core must be manufactured in the United States. If manufacturer has not completed 5 year corrosion testing, a 5 year warranty must be provided. Tracer wire shall be Copperhead™ HS-CCS HDPE 30 mil or pre-approved equal and made in the USA.



VANTAGEPOINT ENGINEERING

18811 NORTH CREEK DRIVE SUITE 100 TINLEY PARK, IL 60477

TEL: 708.575.8888 FAX: 708.575.8889

WWW.VANTAGEPOINT.COM

DETAILS - 2

CARDINAL SQUARE MUNDELEIN, ILLINOIS

NO.	DATE	REMARKS
4	04/04/14	PER VILLAGE COMMENTS
3	03/03/14	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

DATE: 04/04/14

REVISIONS:

1. 03/03/14 PER VILLAGE COMMENTS

2. 03/03/14 PER VILLAGE COMMENTS

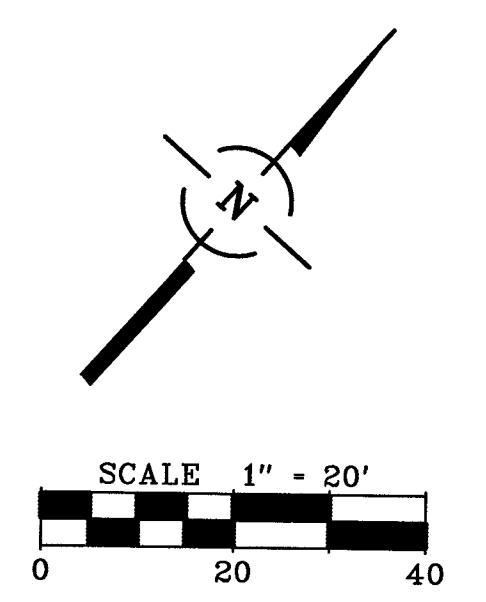
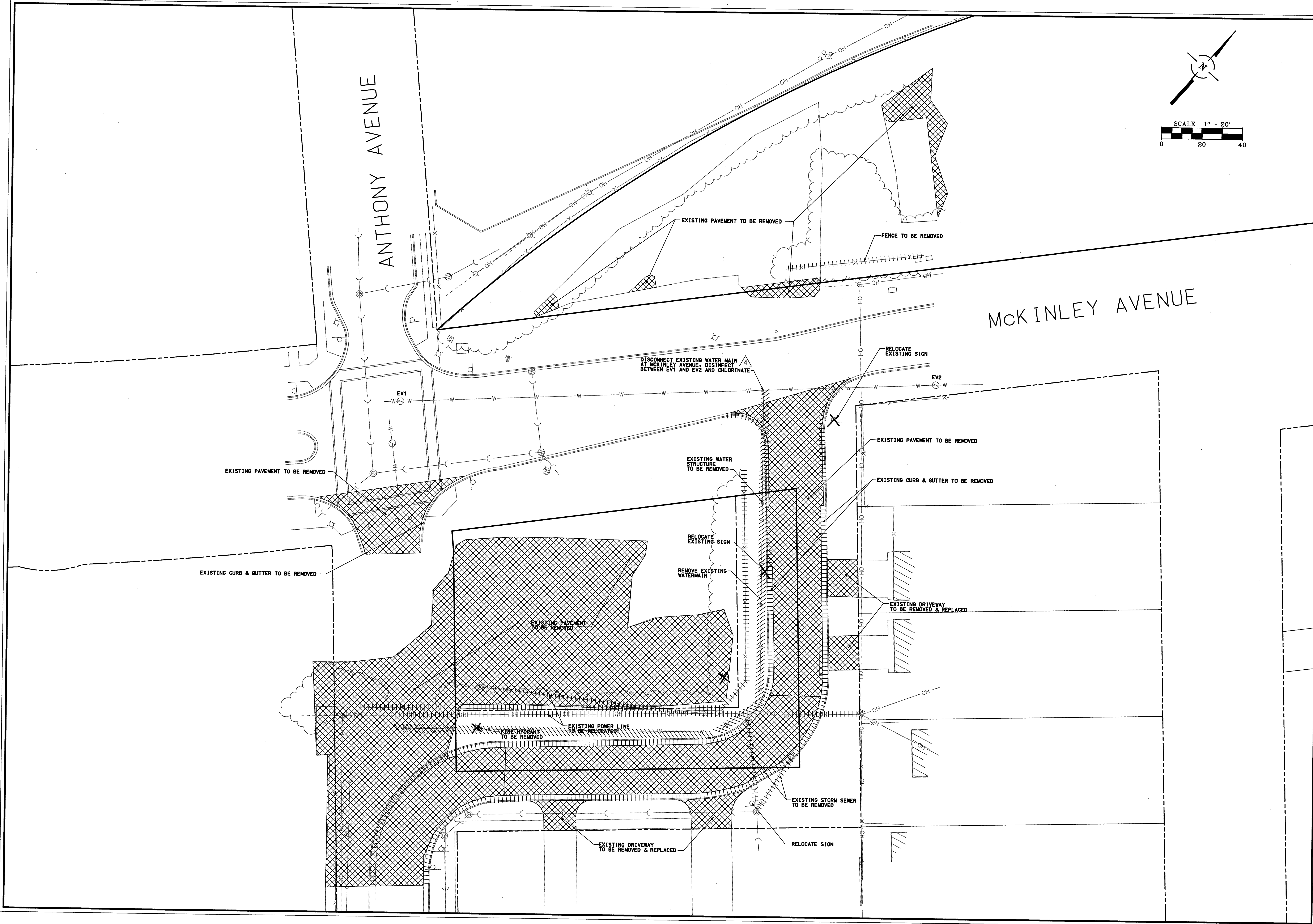
3. 03/03/14 PER VILLAGE COMMENTS

4. 04/04/14 PER VILLAGE COMMENTS

NO. DATE REMARKS

D2

17 OF 20

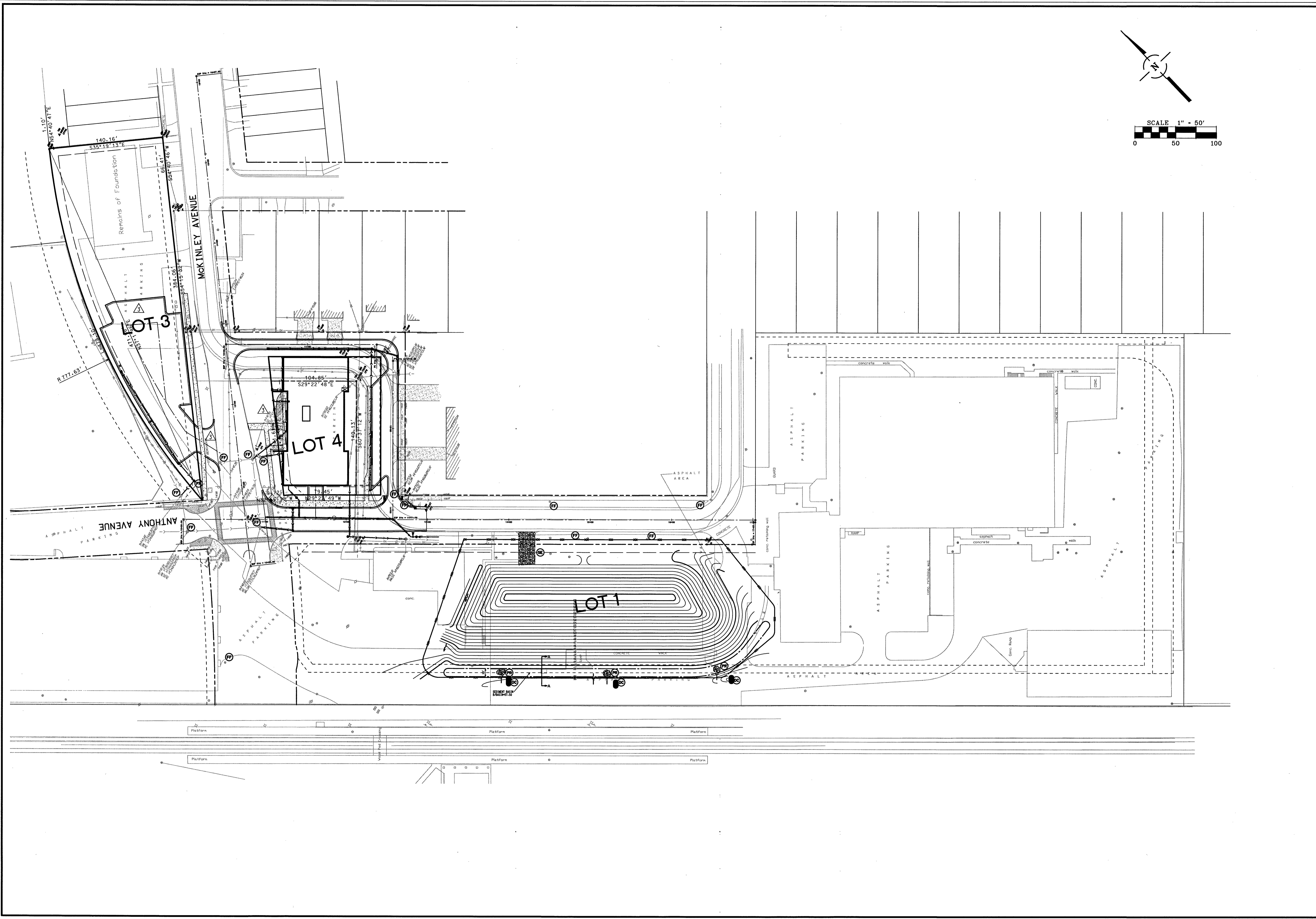


NO.	DATE	REMARKS

4	04/04/14	PER VILLAGE COMMENTS
2	12/10/13	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

DEMOLITION PLAN
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

VANTAGEPOINT
 ENGINEERING
18311 NORTH CREEK DRIVE
 TRIPLE PARK, IL 60077
 815.308.4786
 INFO@VPENG.COM



NO.	DATE	REMARKS

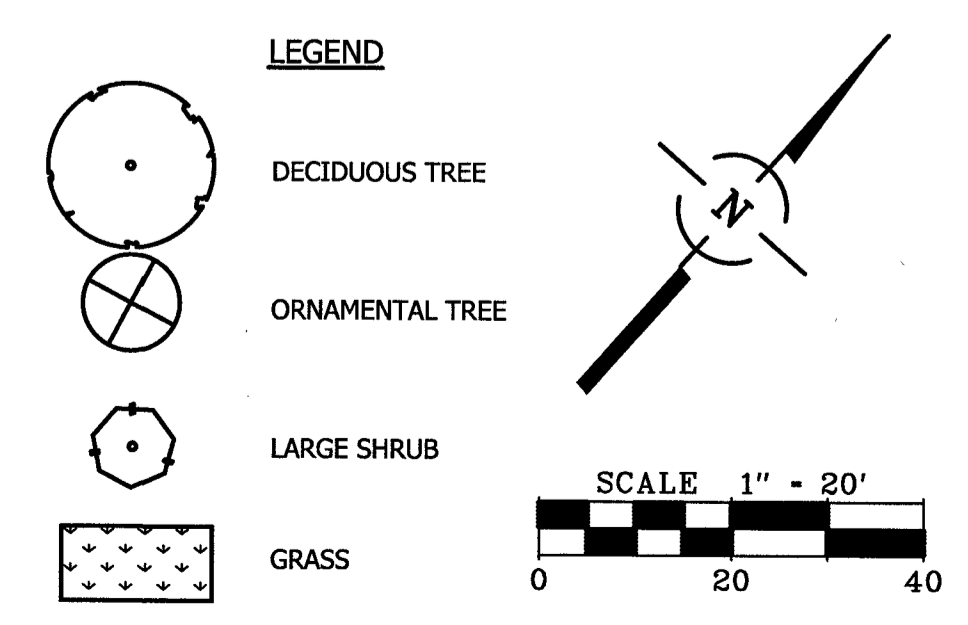
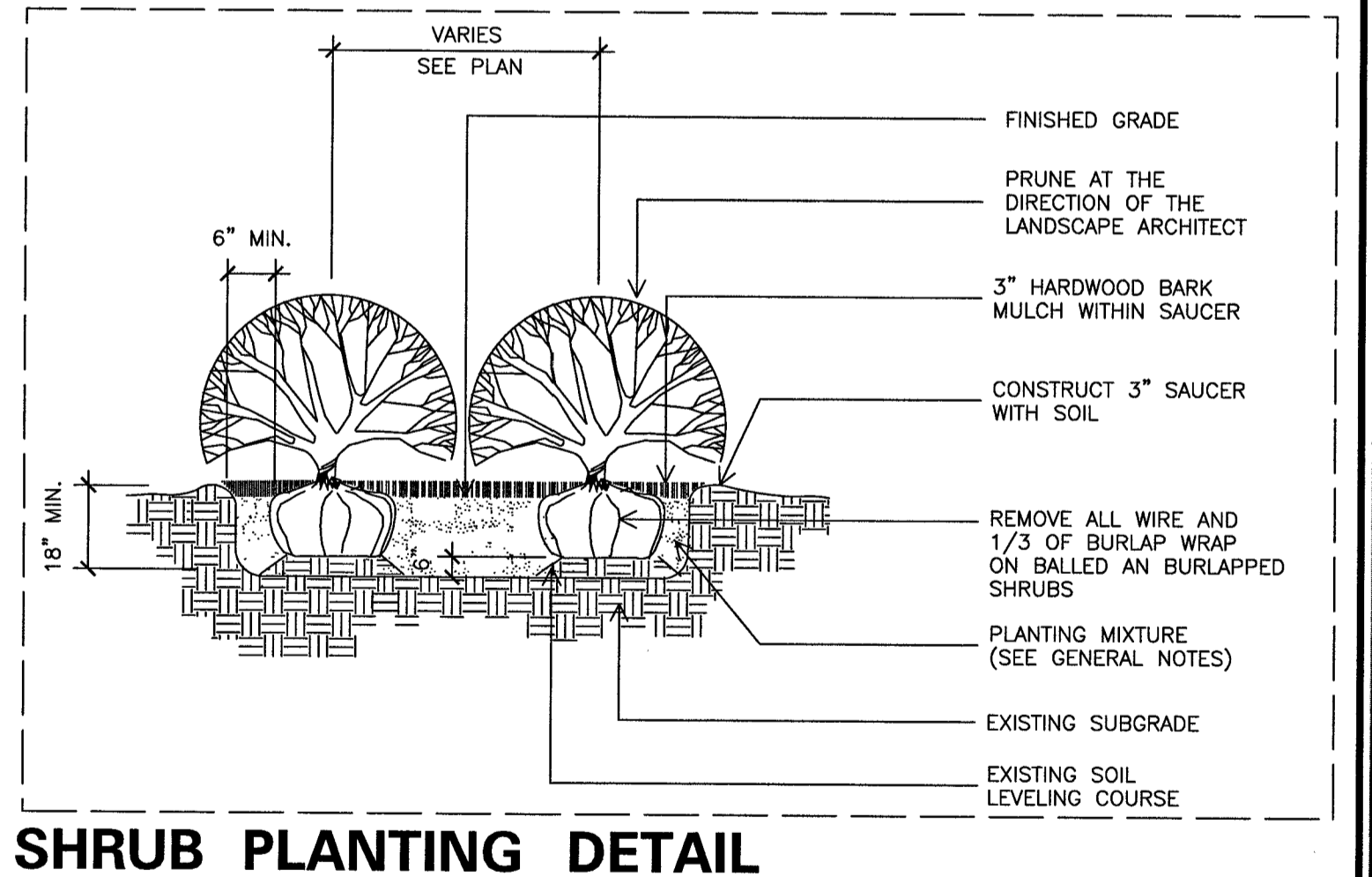
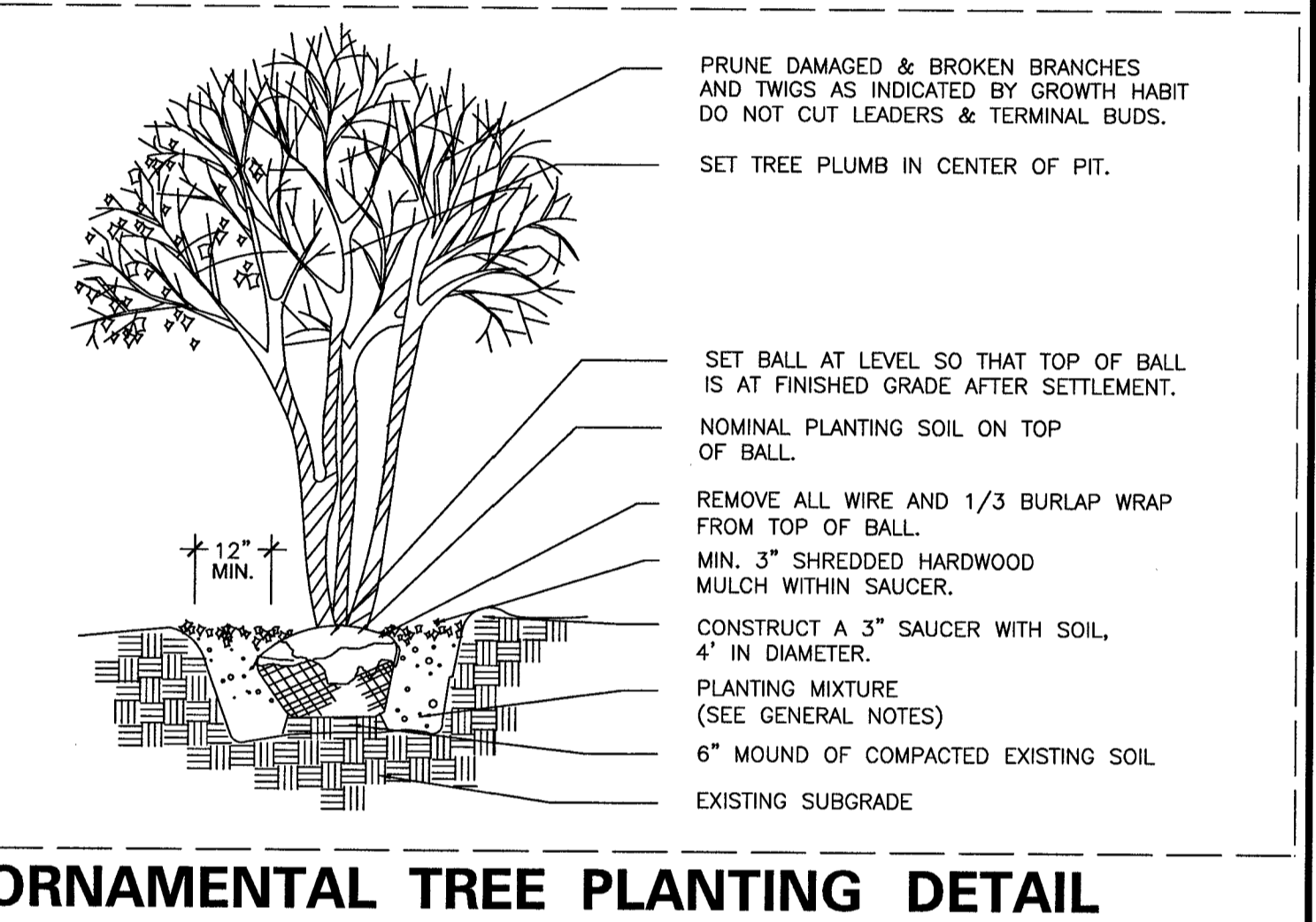
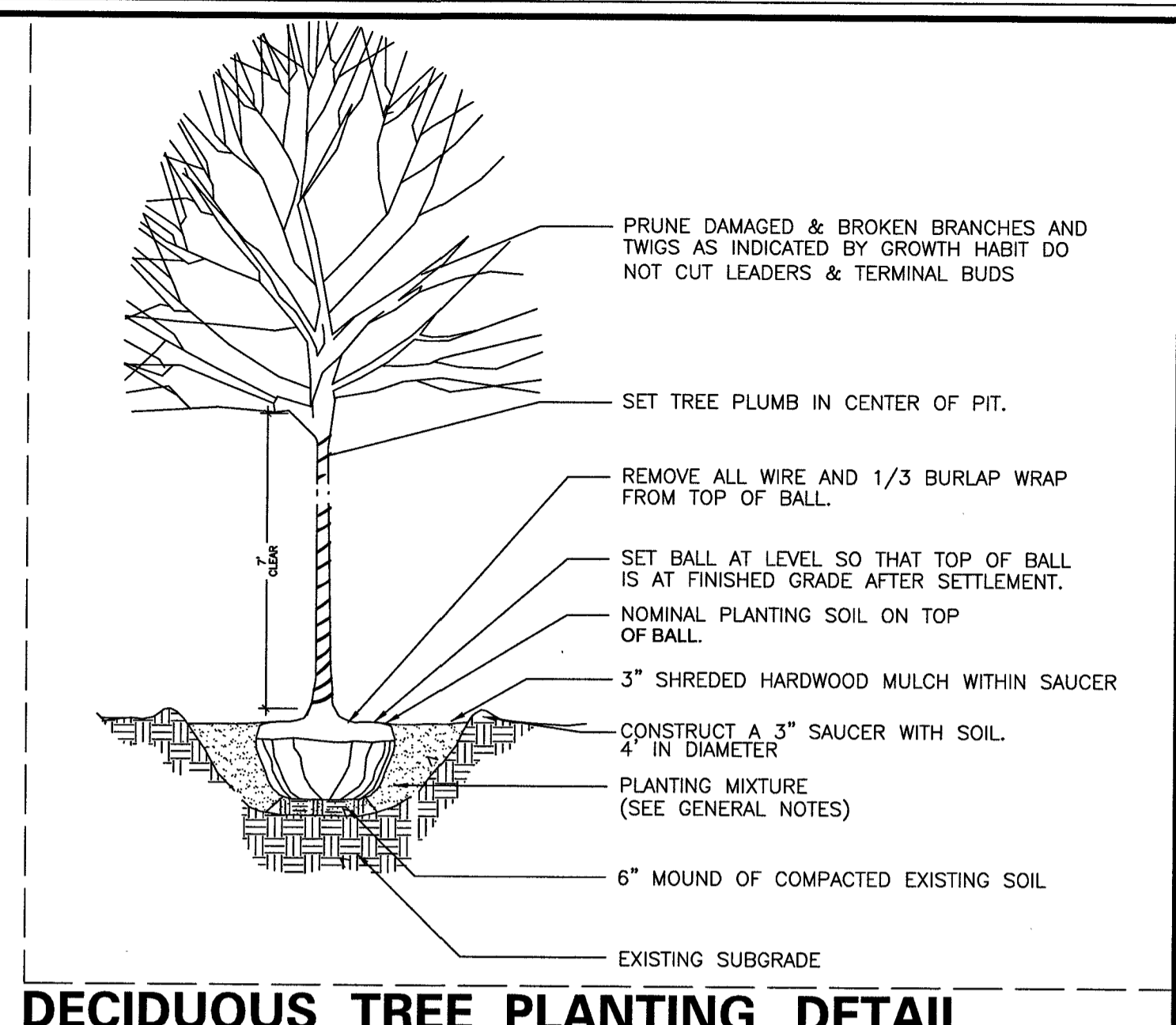
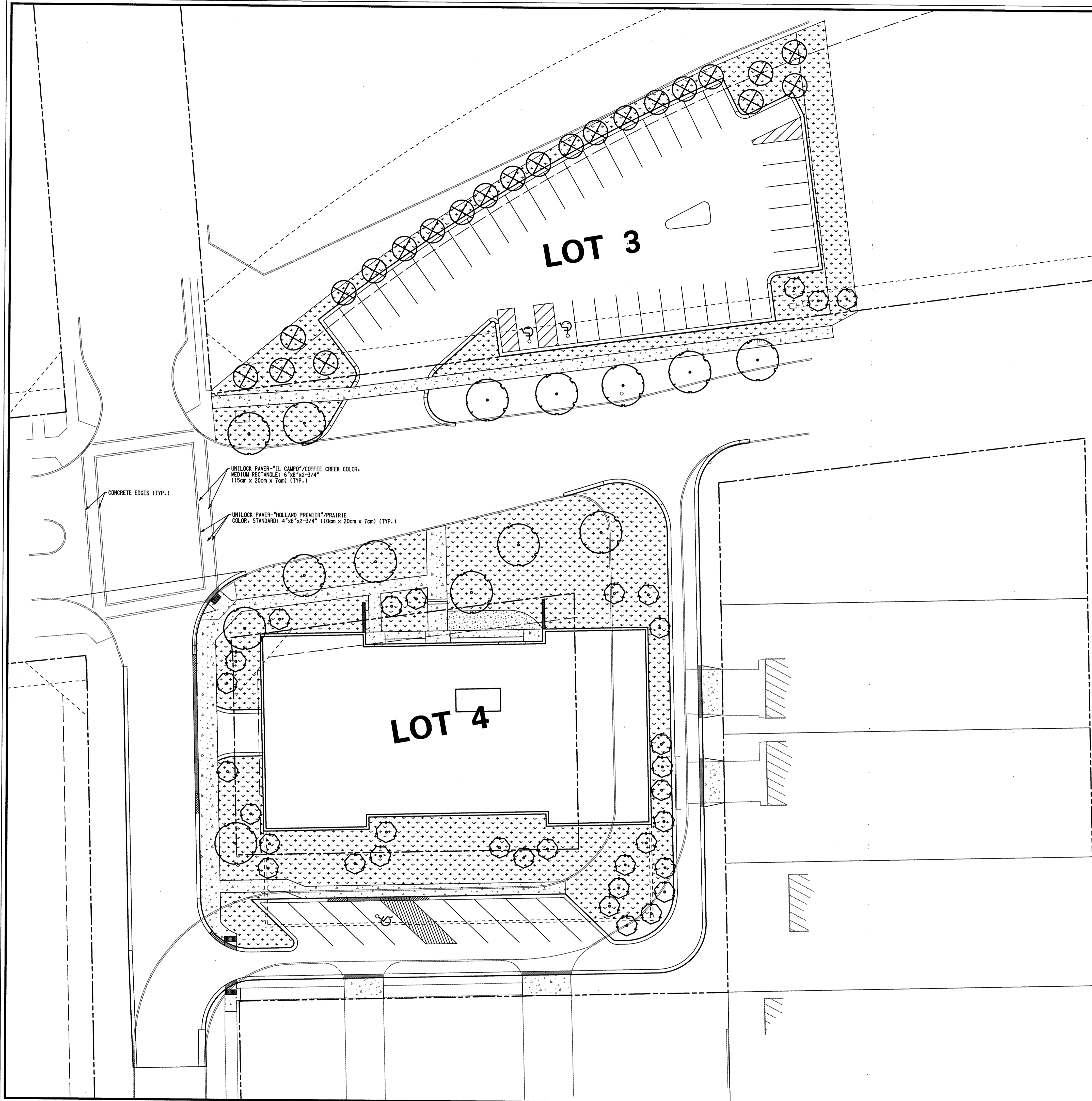
3	03/03/14	PER VILLAGE COMMENTS
2	12/10/13	PER VILLAGE COMMENTS
1	9/17/13	PER VILLAGE COMMENTS

OVERALL SITE PLAN
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

VANTAGE POINT
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NO.	DATE	REMARKS
5	07/30/14	ADDED SHEET TO SET

LANDSCAPE PLAN
CARDINAL SQUARE
 MUNDELEIN, ILLINOIS

VANTAGE POINT
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18311 WORTHY CREEK DRIVE
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SHEET
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 20 OF 20