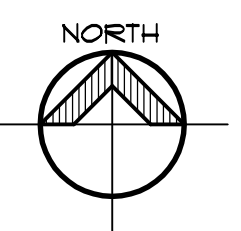


FLOOR PLAN
1/8"=1'-0"



NOT TO BE USED AS
CONSTRUCTION DRAWINGS

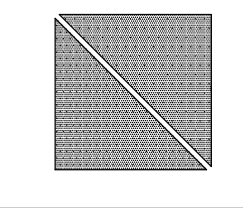
Sheet No.

A-1

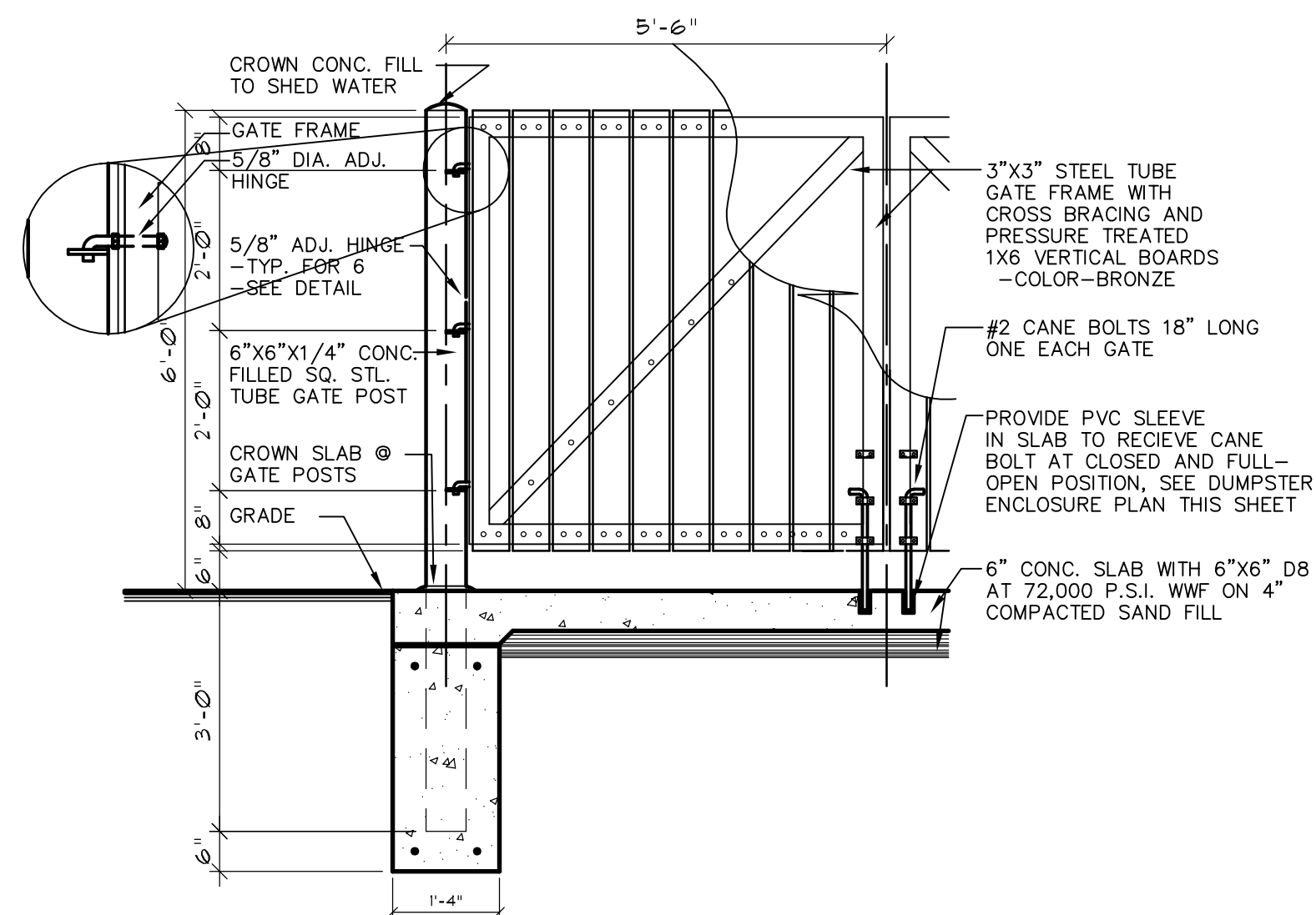
Issued For:
07-16-13 sPA
09-09-13

Sheet Title:
FLOOR PLAN

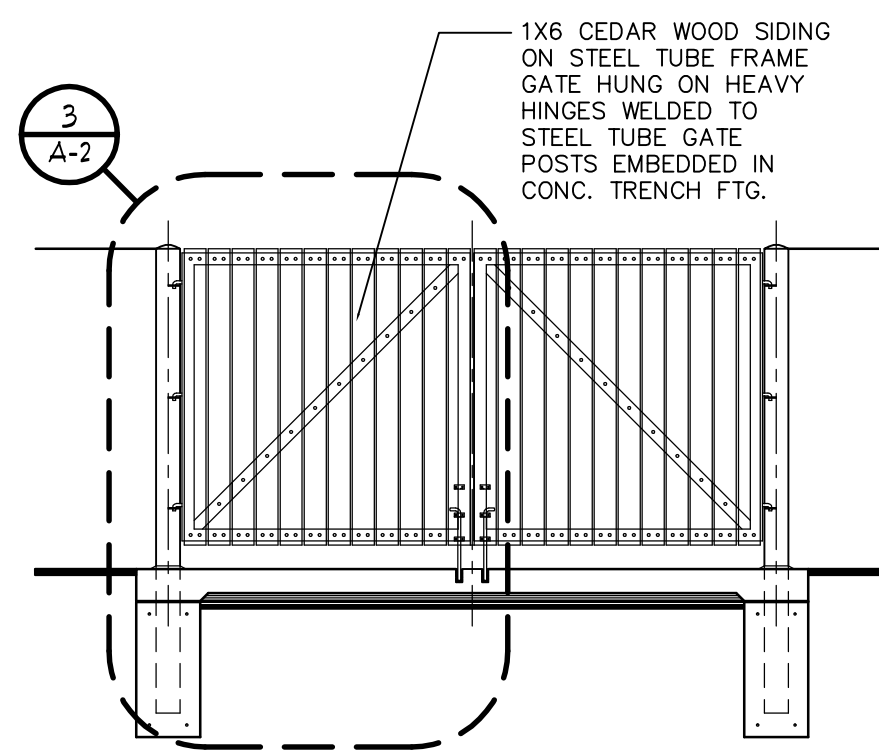
PROPOSED
RETAIL BUILDING
JOHN R ROAD AT AVON ROAD
ROCHESTER HILLS, MICHIGAN



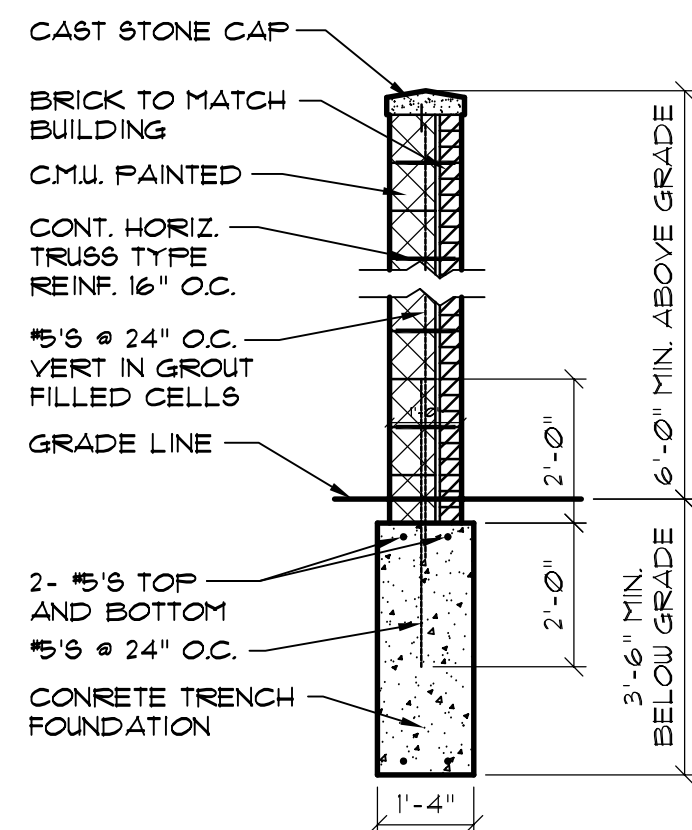
Michael A. Boggio Assoc. Architects
30100 Telegraph Rd., Ste. 216 Bingham Farms MI 48025 (248)-258-5155



3 GUARD POST AND GATE
SCALE: 1/2" = 1'-0"



2 GUARD POST AND GATE
SCALE: 1/4" = 1'-0"

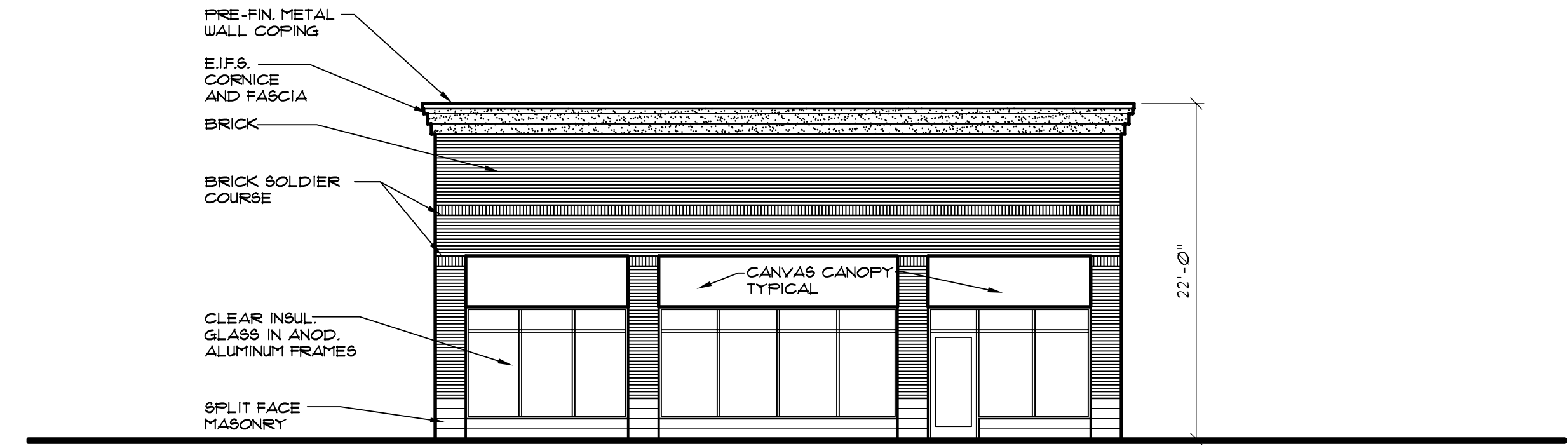


1 TRASH WALL DETAIL
SCALE: 3/8" = 1'-0"

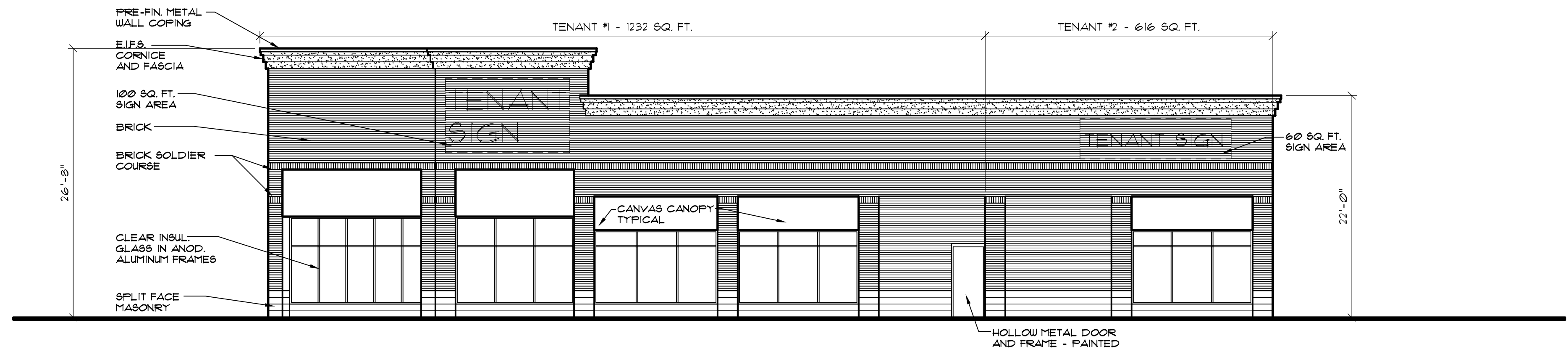
NOTE
ANY MODIFICATIONS TO THE FACADE PLAN (INCLUDING COLOR) MUST BE RESUBMITTED TO THE CITY OF ROCHESTER HILLS FOR REVISED APPROVAL. THE USE OF NEON, FLAGS, OR ANY OTHER TYPE OF UNAPPROVED SIGNAGE SHALL BE PROHIBITED PER SITE PLAN REVIEW.

ALL ROOFTOP HVAC EQUIPMENT INCLUDING H.V.A.C. UNITS, EXHAUST FANS ETC. SHALL BE LOCATED AS REQUIRED BY TENANT FINISH DRAWINGS AND ALL EQUIPMENT SHALL BE SCREENED BY 6'-0" HIGH PARAPET WALLS.

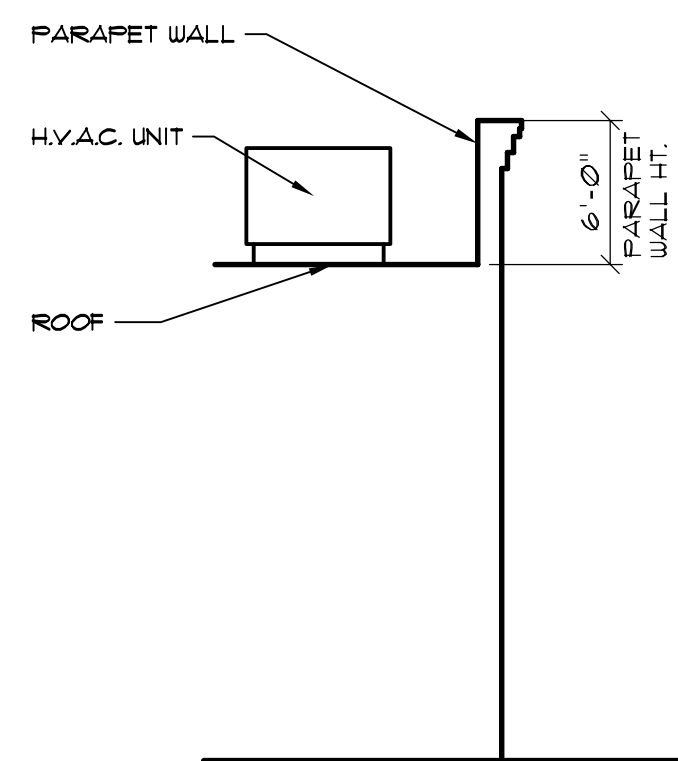
NOTE
SIGNAGE ALLOWED - 10% OF TENANT FACADE SIGNS TO BE INDIVIDUALLY ILLUMINATED LETTERS



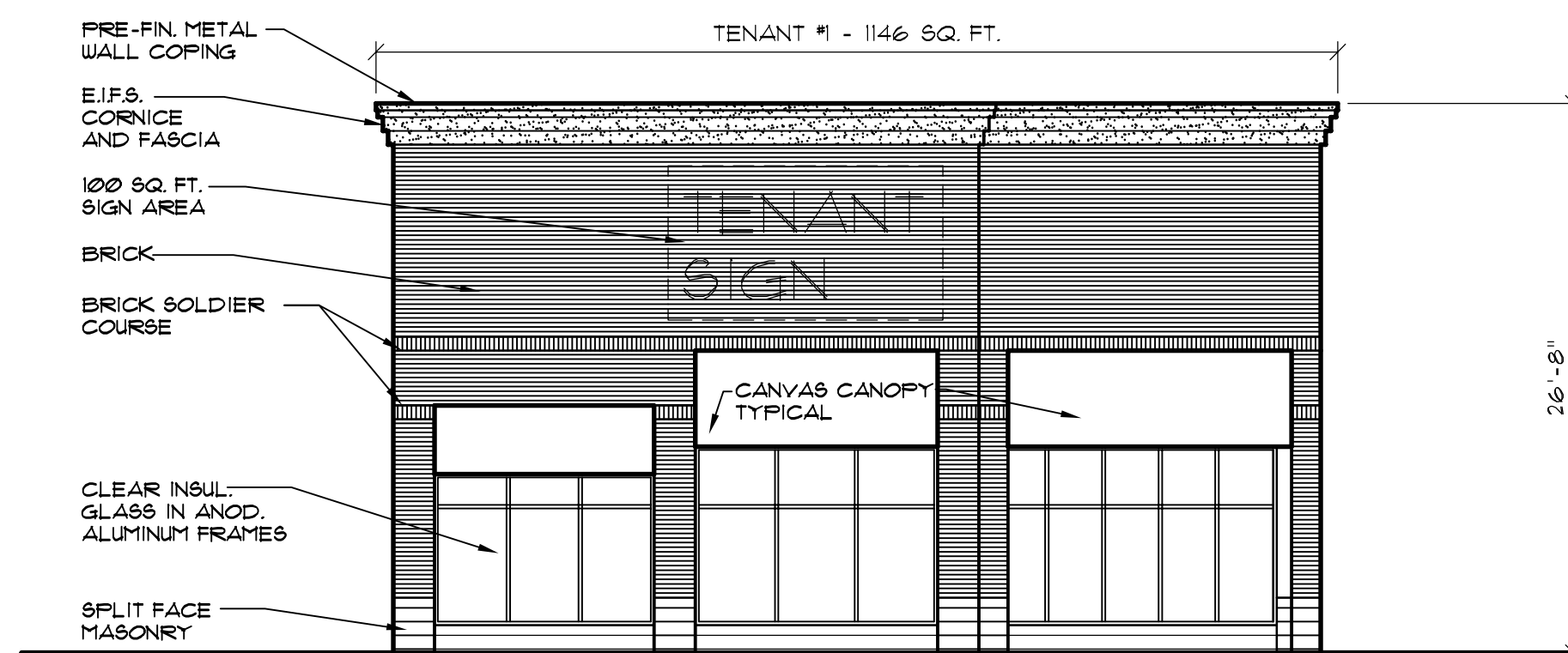
NORTH ELEVATION
1/8" = 1'-0"



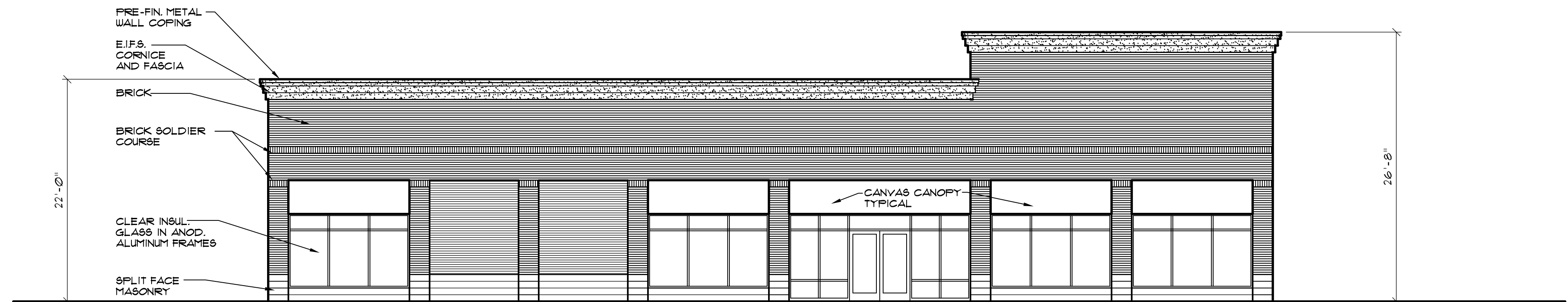
EAST ELEVATION
JOHN R ROAD
1/8" = 1'-0"



SECTION THRU PARAPET WALL/H.V.A.C. SCREEN
1/8" = 1'-0"

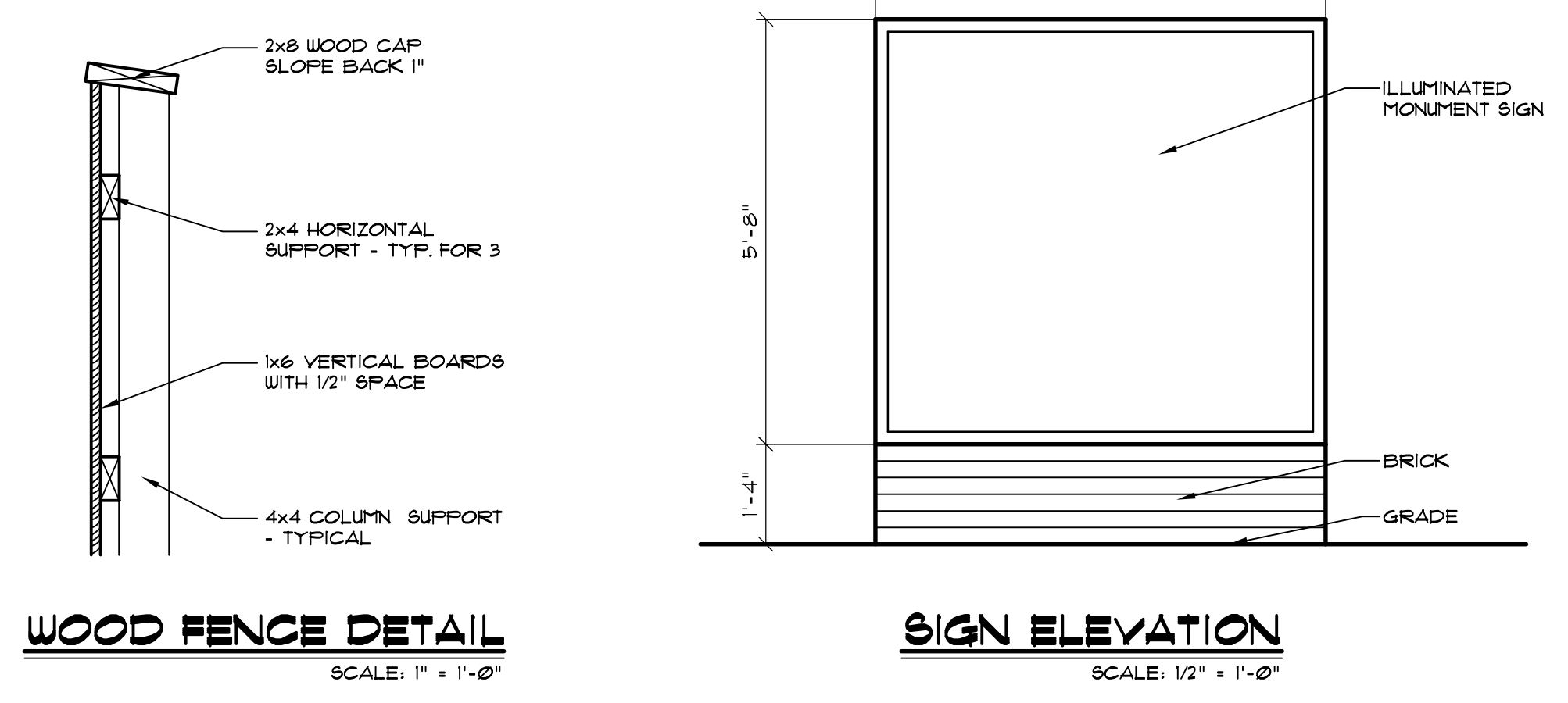


SOUTH ELEVATION
AVON ROAD
1/8" = 1'-0"



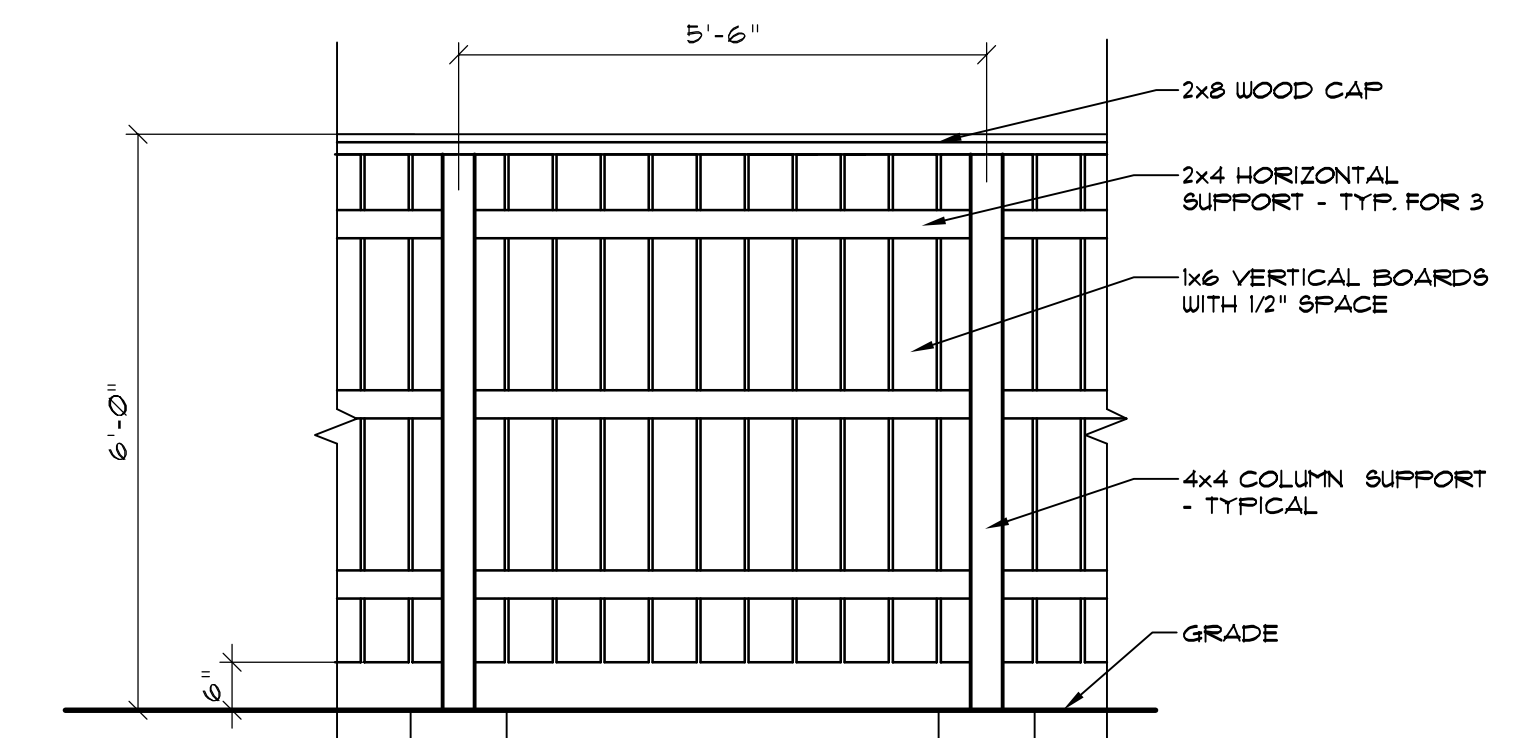
WEST ELEVATION
1/8" = 1'-0"

NOT TO BE USED AS CONSTRUCTION DRAWINGS

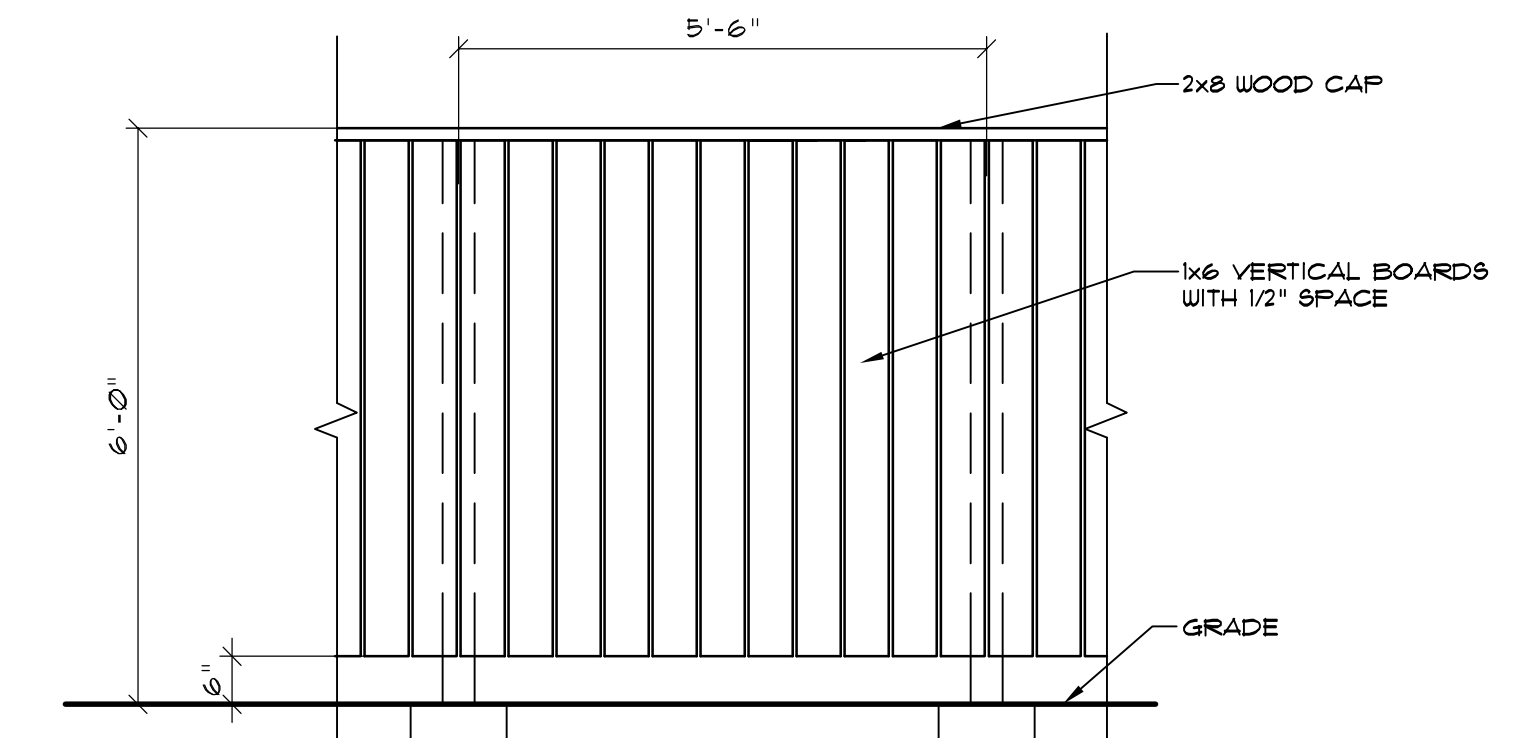


WOOD FENCE DETAIL
SCALE: 1" = 1'-0"

SIGN ELEVATION
SCALE: 1/2" = 1'-0"



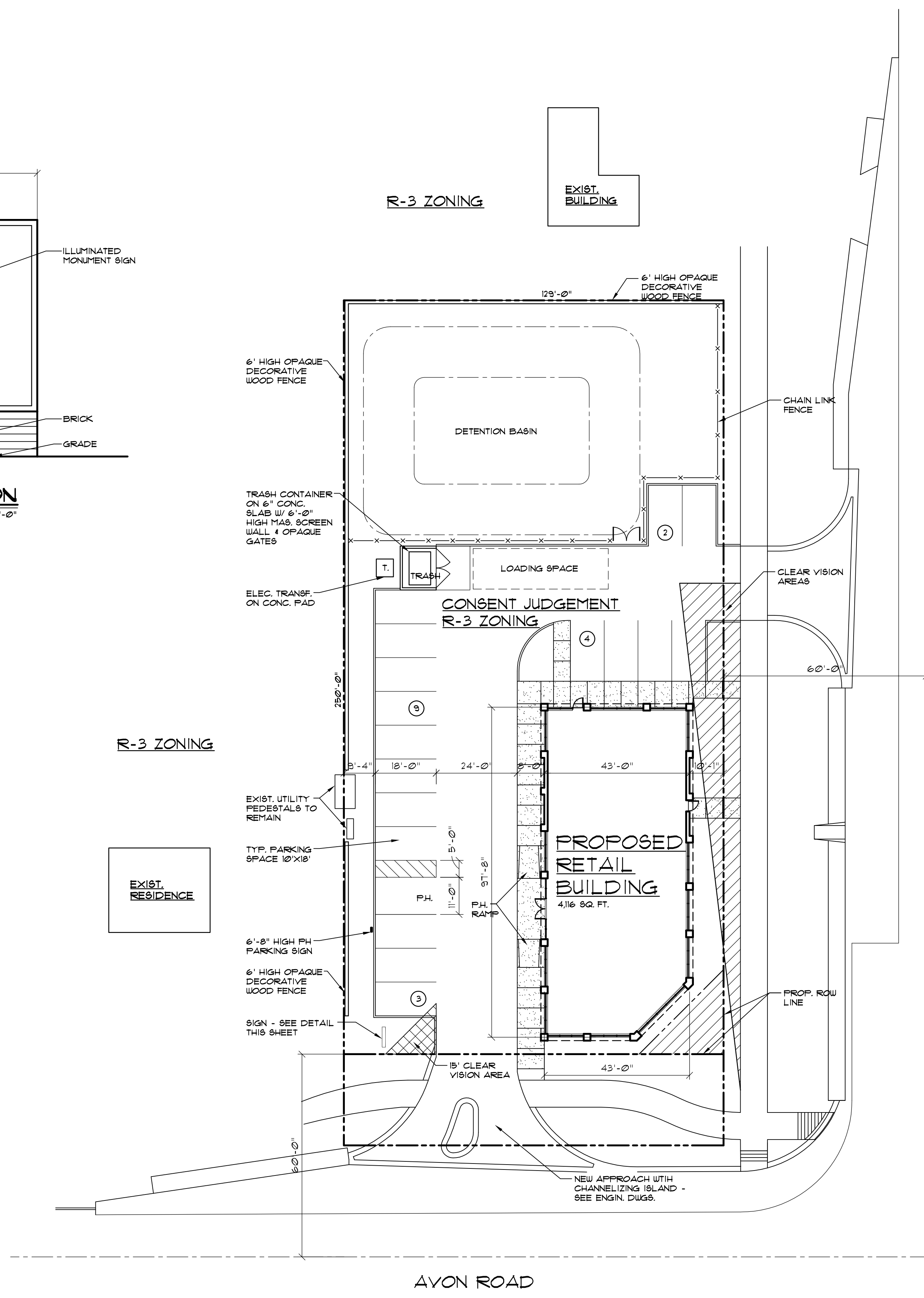
**WOOD FENCE ELEVATION
COMMERCIAL SIDE**
SCALE: 1/2" = 1'-0"



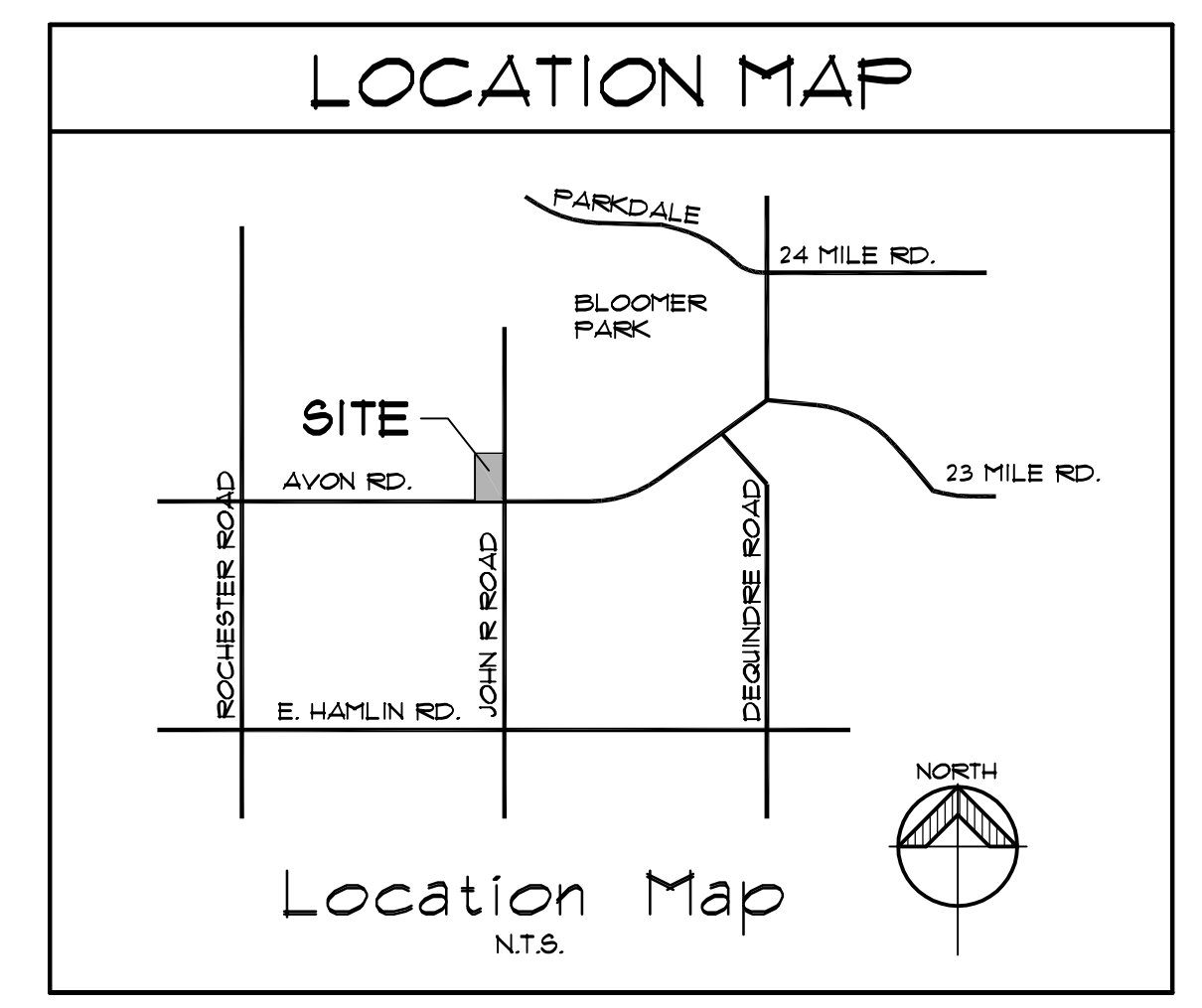
**WOOD FENCE ELEVATION
RESIDENTIAL SIDE**
SCALE: 1/2" = 1'-0"

WOOD FENCE DETAILS

NOTE:
FENCE WILL BE MAINTAINED IN A NEAT AND ORDERLY CONDITION AND WILL BE REPLACED AS THE NEED ARISES.



NOT TO BE USED AS
CONSTRUCTION DRAWINGS



FIRE DEPARTMENT NOTES:

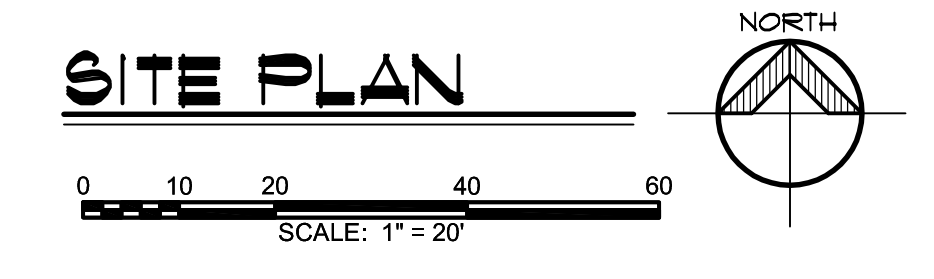
- FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE" AND SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. (FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 503)
- *CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IRC 2006 CHAPTER 14.
- OPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING SAND AND/OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES. (FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 501.6.2 & 501.6.2.3.)

LEGAL DESCRIPTION
LOTS 1 AND 2 OF 'EYESTERS BLOOMER PARK SUB.' PART OF THE SE 1/4 OF SECTION 14, T3N, R1E, ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN.

TABULATIONS

NET SITE:	12x223	24,916 SQ. FT.
BUILDING AREA:		4,116 SQ. FT.
PARKING REQUIRED:	4,116 SF. / 300	14 SPACES
PARKING PROVIDED:	14x125	18 SPACES (INCLUDES 1 VAN ACCESSIBLE SPACE)

CODE COMPLIANCE
2009 MICHIGAN BUILDING CODE
AREA: 4,116 SQ. FT.
USE GROUP: M - MERCANTILE
CONSTRUCTION TYPE MINIMUM: 5B (NON SPRINKLED)
ALLOWABLE AREA PER 503: 9000 SQ. FT.
PLUMBING, EGRESS, ETC. TO BE DETERMINED AT TENANT CONSTRUCTION



SEAL

MICHAEL A. BOGGIO JR.
REGISTERED ARCHITECT NO. 24098

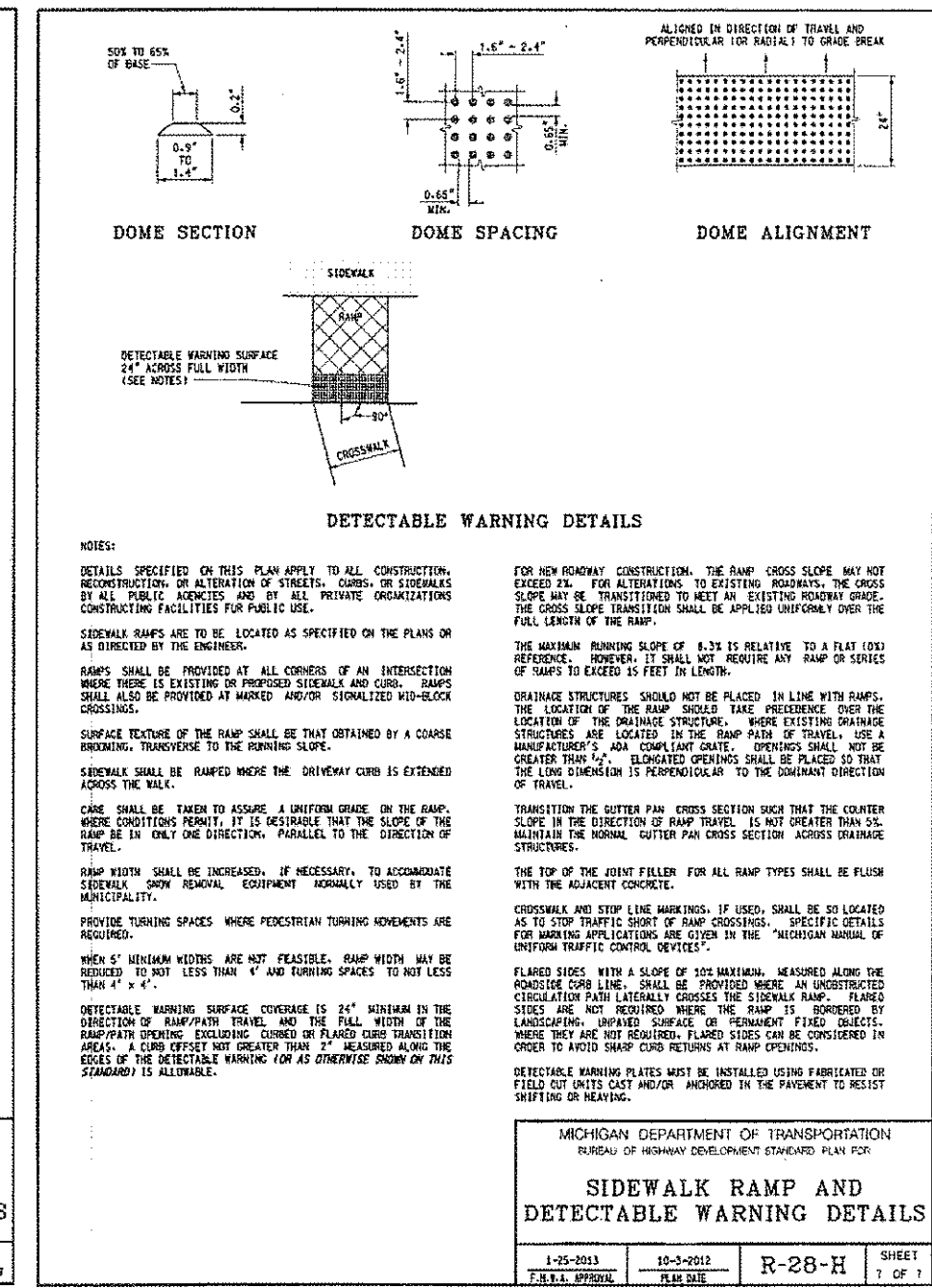
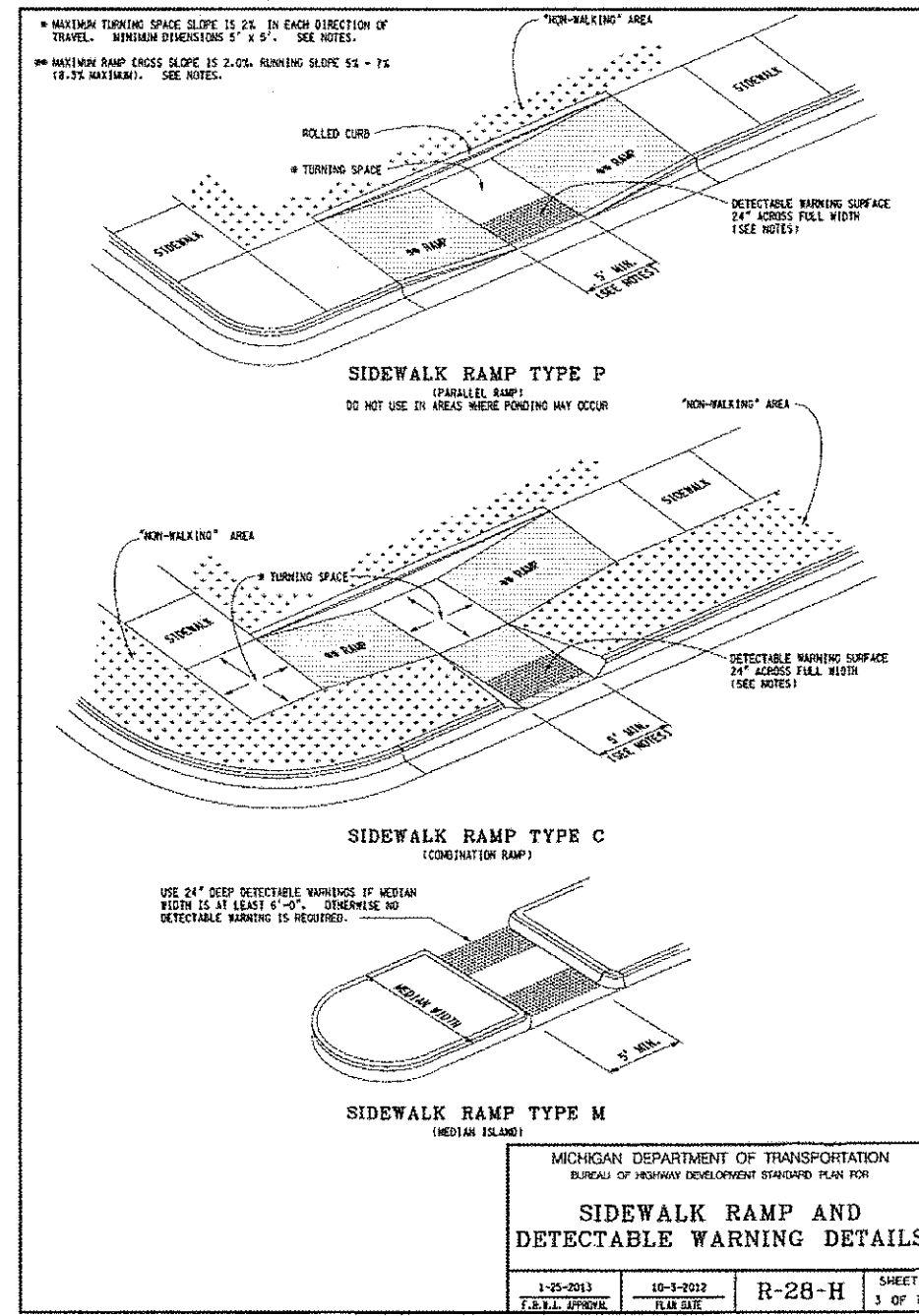
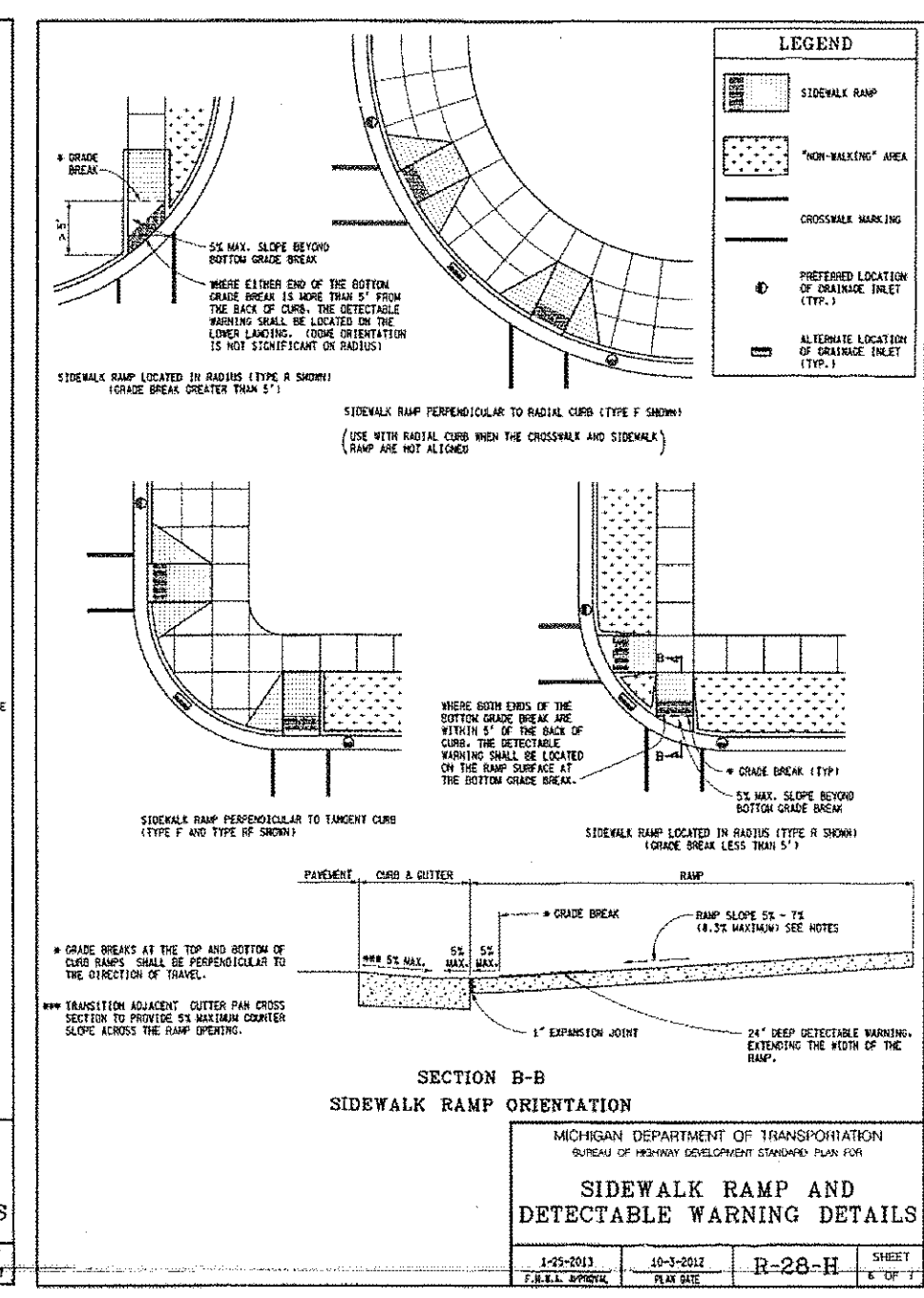
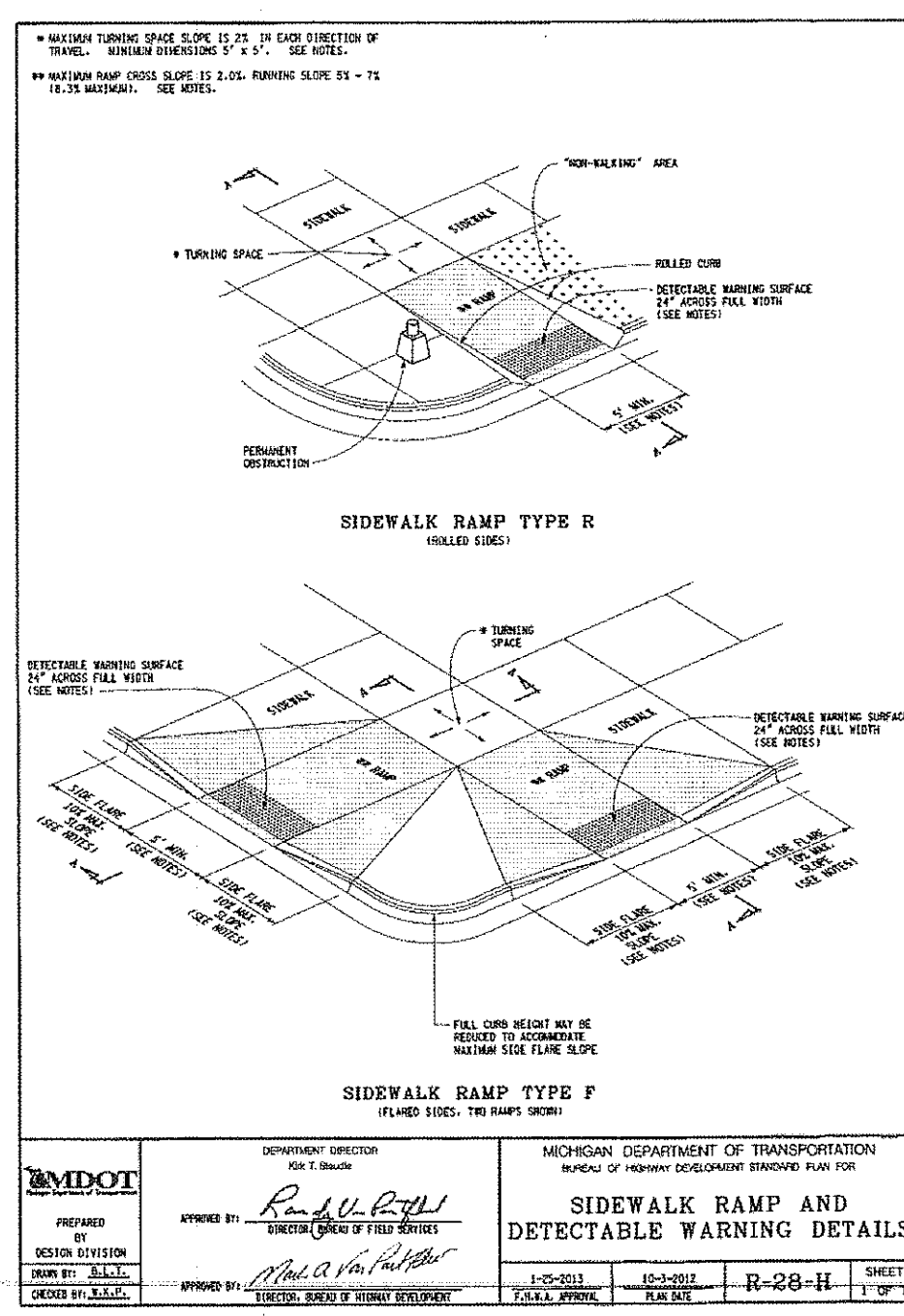
Michael A Boggio Assoc. Architects
 30100 Telegraph Rd., Ste. 216 Bingham Farms MI 48025 (248) 258-5155

PROPOSED RETAIL BUILDING
 JOHN R ROAD AT AVON ROAD
 ROCHESTER HILLS, MICHIGAN

Sheet Title:
SITE PLAN

Issued For:
 01-16-13 S.P.A.
 03-03-13
 10-01-13
 10-03-13

Sheet No.
SP-1



MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT ENGINEERING PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

10-20-03 10-20-03 R-28-H SHEET 1 OF 1

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT ENGINEERING PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

10-20-03 10-20-03 R-28-H SHEET 1 OF 1

CONSTRUCTION AND SOIL EROSION WORK SCHEDULE:

1. PLACE SILT FENCE AROUND PROPOSED CONSTRUCTION AREA AS SHOWN ON THIS PLAN.
2. INSTALL GRAVEL MUD TRACKING MAT NEAR ENTRANCE WHERE INDICATED.
3. INSTALL INLET FILTERS ON ALL EXISTING DRAINAGE STRUCTURES.
4. DEMOLISH EXISTING BUILDING AND PAVEMENT PER DEMOLITION PLAN AND DISPOSED OF MATERIAL OFFSITE IN AN APPROVED LANDFILL.
5. MASS GRADE BUILDING PAD AND PARKING AREA.
6. START BUILDING CONSTRUCTION.
7. INSTALL SANITARY, STORM AND WATERMAIN COMPLETE. INSTALL LOW POINT INLET FILTERS ON ALL DRAINAGE STRUCTURES.
8. INSTALL PAVEMENT. REPAIR OR REPLACE LOW POINT INLET FILTERS AS REQUIRED. SEED & MULCH ALL AREAS DISTURBED BY CONSTRUCTION.
9. COMPLETE BUILDING CONSTRUCTION AND FINAL LANDSCAPING.
10. SEED AND MULCH ANY DISTURBED AREA.
11. REMOVE TEMPORARY EROSION CONTROLS UPON STABILIZATION OF SITE.
12. IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO INSURE THAT ALL EROSION CONTROL DEVICES ARE MAINTAINED AS REQUIRED THROUGHOUT THE CONSTRUCTION AND THAT THE STREETS ARE KEPT FREE OF MUD AND CONSTRUCTION DEBRIS. THE ACCUMULATED SEDIMENT MUST BE REMOVED FROM THE SEDIMENT BASINS PERIODICALLY THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

CITY OF ROCHESTER HILLS SESC NOTES:

1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF THE OAKLAND COUNTY DRAIN COMMISSIONER.
2. ALL TEMPORARY AND PERMANENT (POST CONSTRUCTION) SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE CITY OF ROCHESTER HILLS CURRENT MS4 PERMIT. ANY CONFLICT BETWEEN THESE STANDARDS AND THE MS4 PERMIT, THE PERMIT'S CONDITIONS SHALL TAKE PRECEDENCE.
3. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
4. ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS.
5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED. THIS WOULD INCLUDE TEMPORARY SEDIMENTATION PONDS AND TEMPORARY SOD FILTERS.
6. STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
7. SOIL EROSION CONTROL PRACTICES SHALL BE ESTABLISHED IN THE EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.

FIRE DEPARTMENT NOTES:

1. FOR COMMERCIAL BUILDINGS OVER 30-Feet High OR 3 STORIES REQUIRE TWO OR MORE SEPARATE FIRE ACCESS ROADS AT LEAST 26-Feet WIDE. AT LEAST ONE ROAD SHALL BE WITHIN A MINIMUM 15-Feet AND A MAXIMUM 30-Feet FROM THE BUILDING AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING.
2. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS SPACED NOT MORE THAN 100 FEET APART. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE", AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
3. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND FIRE HYDRANTS.
4. FIRE DEPARTMENT CONNECTIONS, WHEN REQUIRED, SHALL BE LOCATED VISIBLY ON THE STREET FRONT OF THE BUILDING, WITHIN 50-Feet OF AN APPROVED FIRE DEPARTMENT ACCESS ROAD AND A FIRE HYDRANT SHALL BE LOCATED WITHIN 100-Feet OF THE F.D.C.
5. FIRE DEPARTMENT CONNECTIONS SHALL NOT BE OBSCURED OR OBSTRUCTED BY LANDSCAPING, PARKING OR BY ANY OTHER PERMANENT OR TEMPORARY MATERIALS OR DEVICE.
6. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14.
7. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAND AND/OR WATER FOR PREPARATION OF MORTAR SHALL BE WITHIN CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES. CONTACT ROCHESTER HILLS FIRE DEPARTMENT FOR PERMIT INFORMATION.
8. A "KNOX" KEY SYSTEM MAY BE REQUIRED IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE FIRE DEPARTMENT.

HYDRANT REQUIREMENTS:

1. BUILDING CONSTRUCTION- TYPE V-B
 2. BUILDING AREA- 4,116 S.F. *
 3. REQUIRED FIRE FLOW- 1,750 GPM *
 4. REQUIRED HYDRANTS- 1 WITH 400' AVERAGE SPACING *
- * REQUIRED FIRE FLOW AND HYDRANTS TAKEN FROM TABLES B105.1 AND C105.1 IN THE CITY OF ROCHESTER HILLS ENGINEERING DESIGN STANDARDS.

WATERMAIN NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION OVER THAT WORK.
2. ALL HYDRANTS, INCLUDING NOZZLES AND PROJECTIONS SHALL BE 3' MINIMUM FROM EDGE OF SIDEWALK, OR 6' MINIMUM FROM BACK OF CURB.
3. THE WATERMAIN WILL HAVE A MINIMUM OF 8 FEET OF COVER.
4. THE CONTRACTOR SHALL DETERMINE DEGREE OF BEND FOR THE WATERMAIN FITTINGS. PIPE DEFLECTIONS SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE DEFLECTION.
5. WATERMAIN 8" AND LARGER SHALL BE CEMENT-LINED (DOUBLE THICKNESS), DUCTILE IRON PIPE, CLASS 54.
6. A VERTICAL SEPARATION OF 18 INCHES MUST BE MAINTAINED BETWEEN THE WATERMAIN AND SANITARY SEWERS, STORM SEWERS, OR OTHER PROPOSED UTILITIES.
7. ALL GATE VALVES SHALL BE RESILIENT WEDGE OR SEATED TYPE GATE VALVE (E.J.L.W. OR U.S. PIPE).
8. RESTRAINED RODDED JOINTS SHALL BE USED AT ALL VERTICAL BENDS. THE NUMBER OF RESTRAINED RODDED JOINTS REQUIRED SHALL BE DETERMINED BY THE MANUFACTURER, SUBJECT TO APPROVAL BY THE CITY ENGINEER.
9. USE HYDRANT CONNECTION DETAILS PER CURRENT CITY STANDARD DETAIL SHEET.
10. WATER SERVICES SHALL BE SDR-9 POLY PIPE OR TYPE 'K' COPPER.

WATERMAIN BASIS OF DESIGN:

INITIAL SERVICE CONNECTIONS-	0
TOTAL SERVICE CONNECTIONS-	4.48 (NUMBER OF PEOPLE)
INITIAL DESIGN AVERAGE DAY FLOW-	0 MGD
TOTAL DESIGN AVERAGE DAY FLOW-	4.48 x 120 / 1,000,000 = 0.00053 MGD
INITIAL MAXIMUM DAY FLOW-	0 MGD
TOTAL MAXIMUM DAY FLOW-	4.48 x 3.0 = 13.44 MGD

SANITARY SEWER NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION OVER THAT WORK.
2. ALL SANITARY SEWER BUILDING LEADS WILL BE SOLID WALL PVC SDR 23.5 PIPE.
3. SANITARY SEWER DROP CONNECTIONS MUST BE EXTERNAL TYPE.
4. THE MINIMUM SLOPE FOR 6" SANITARY BUILDING LEADS IS 1.00%.
5. ALL PROPOSED SEWERS SHALL HAVE CHEMICALLY WELDED JOINTS.
6. THE CONTRACTOR SHALL HAVE A TELEVISION INSPECTION OF THE EXISTING SANITARY LEAD PERFORMED PRIOR TO CONSTRUCTION TO VERIFY THE CONDITION OF THE EXISTING PIPE. THE CITY INSPECTOR SHALL WITNESS THE SCOPE AND A VIDEO COPY SHALL BE PROVIDED TO THE CITY.

SANITARY SEWER BASIS OF DESIGN:

A. CONTRIBUTION TO EXISTING 10" SEWER:

BLDG. DESIGNATION	BLDG. USE AREA (SF)	UNIT FACTOR	UNITS
New Retail	4,116	0.31/1,000 SF	1.28

No. of people = 3.5 ppu x 1.28 units = 4.48 people

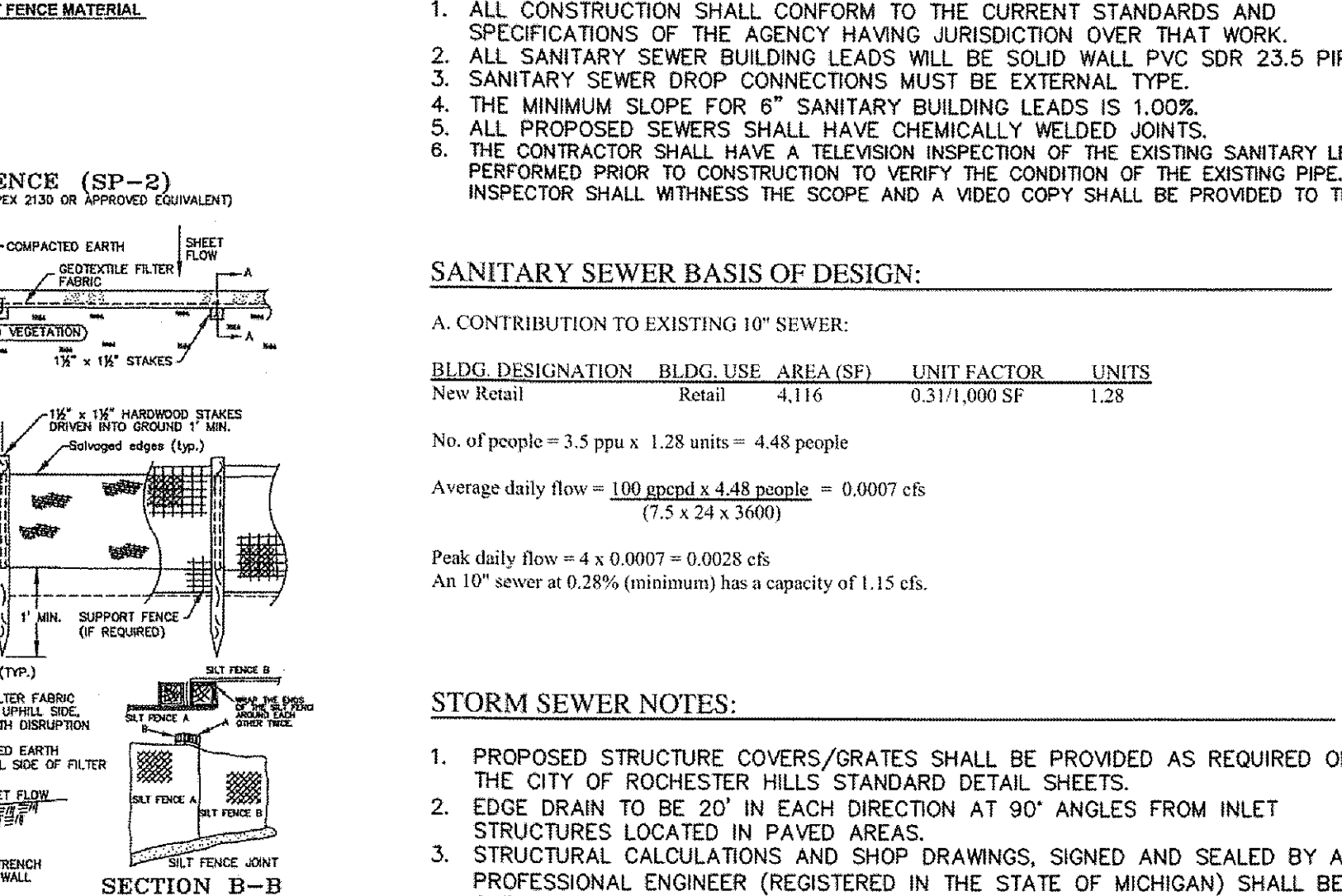
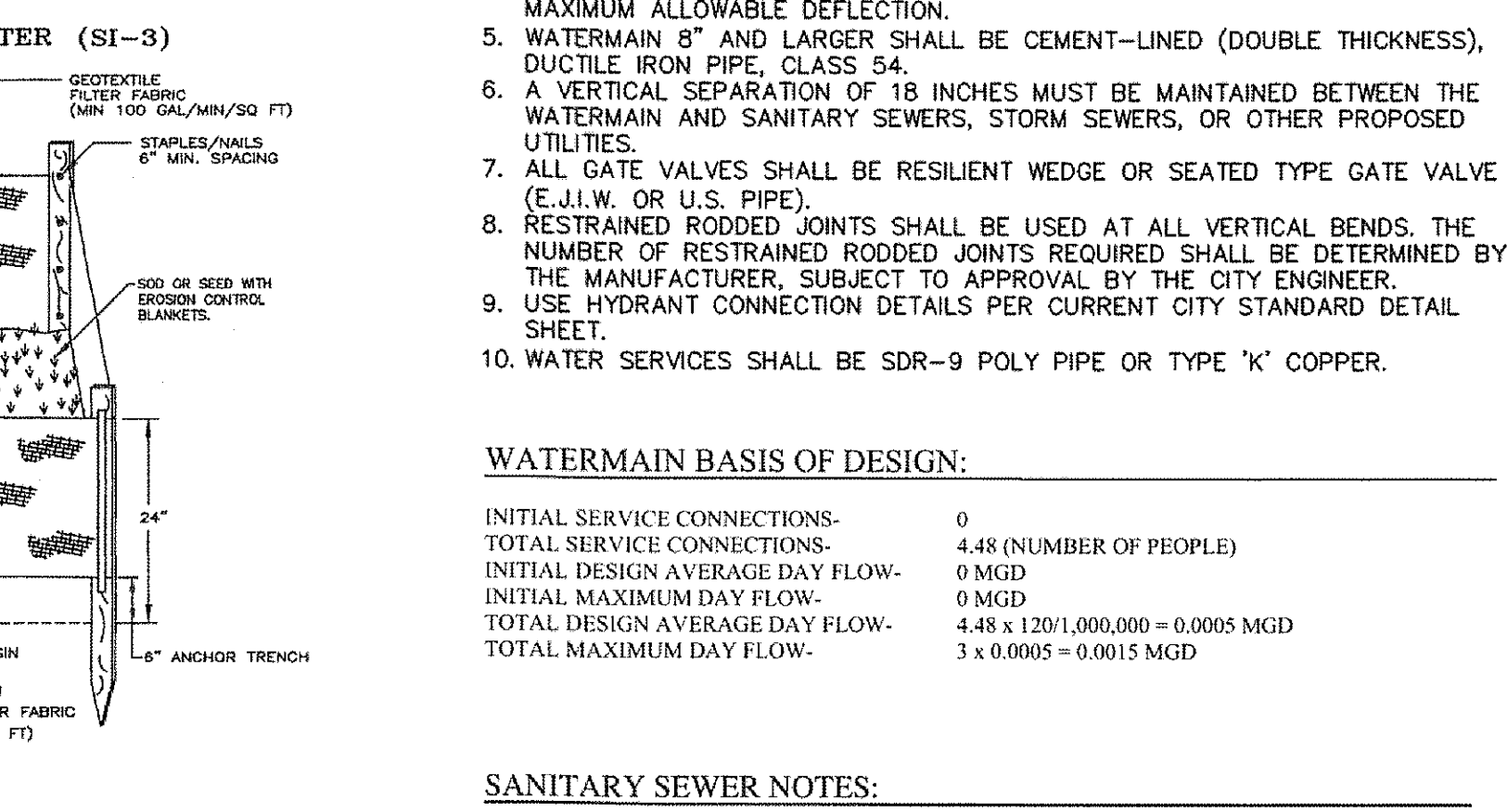
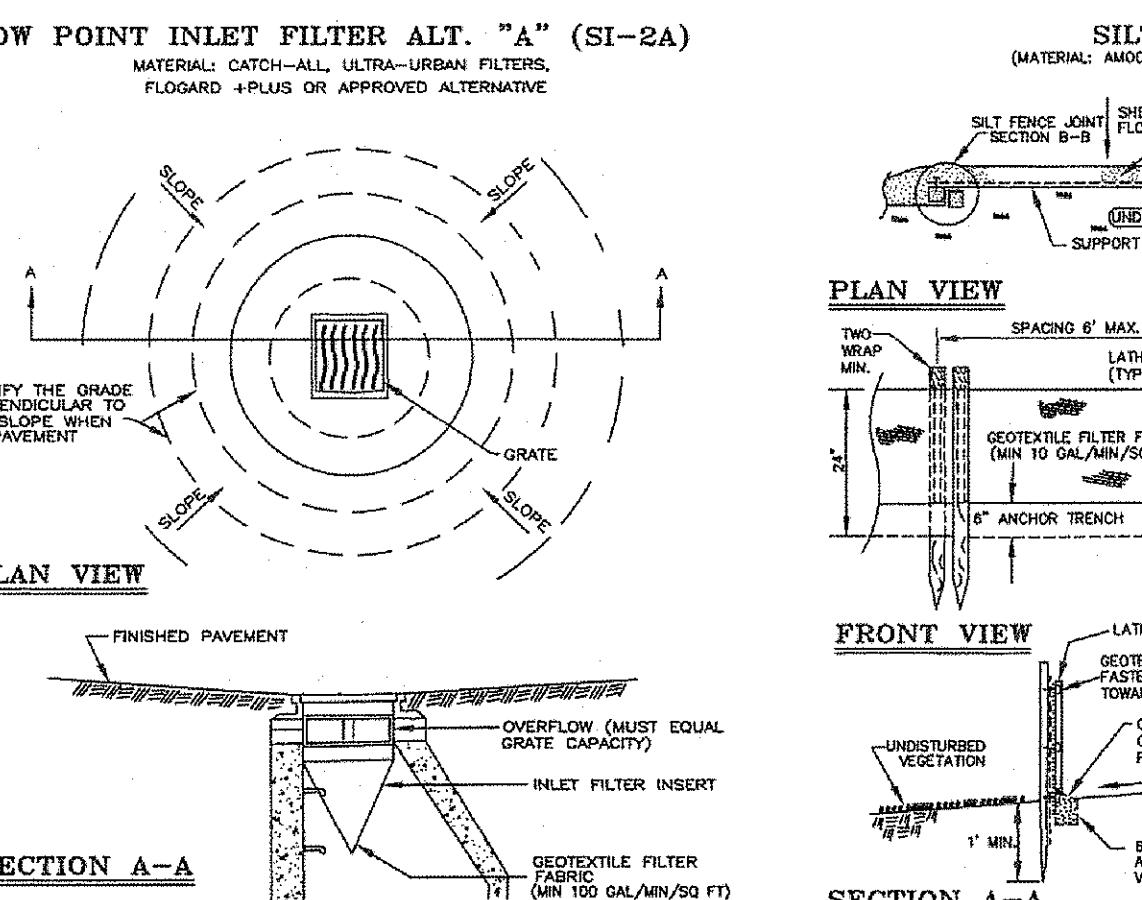
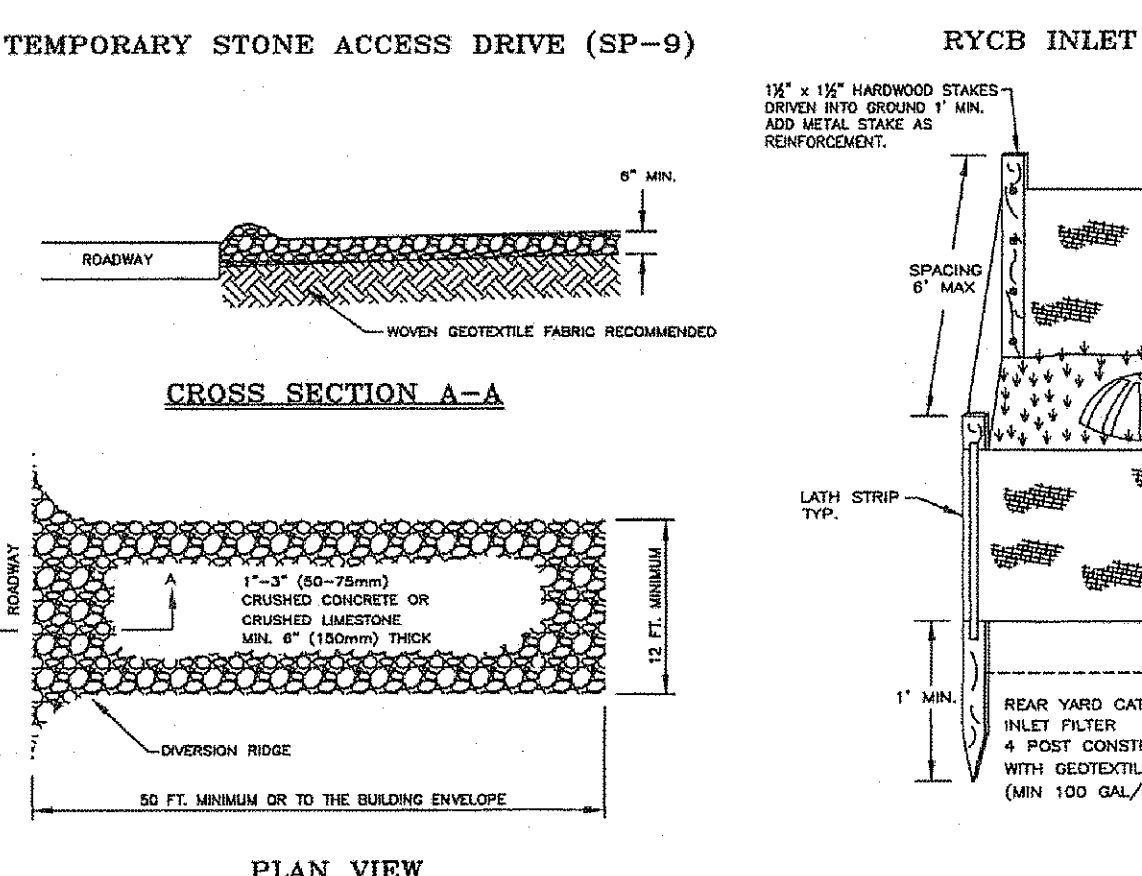
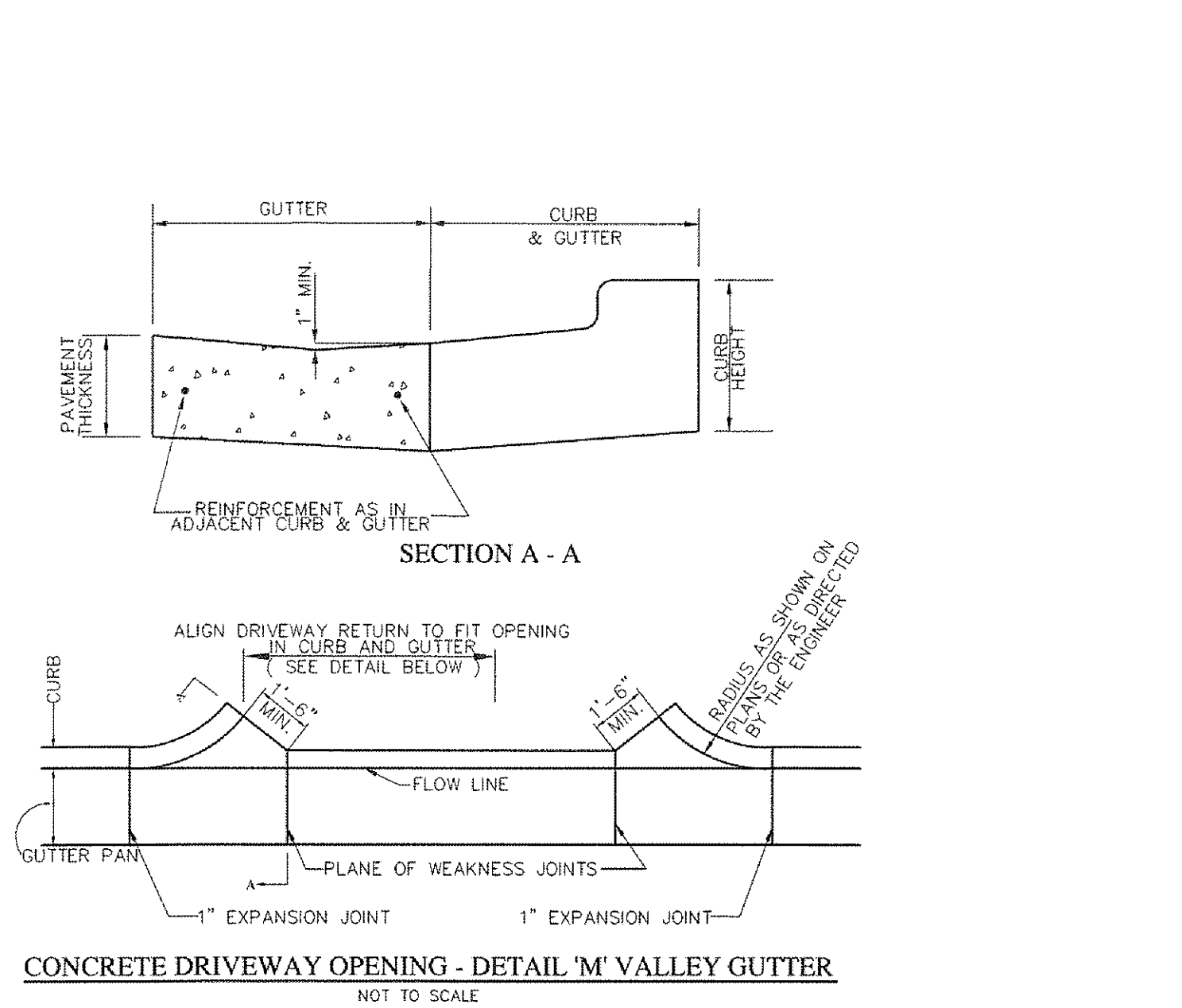
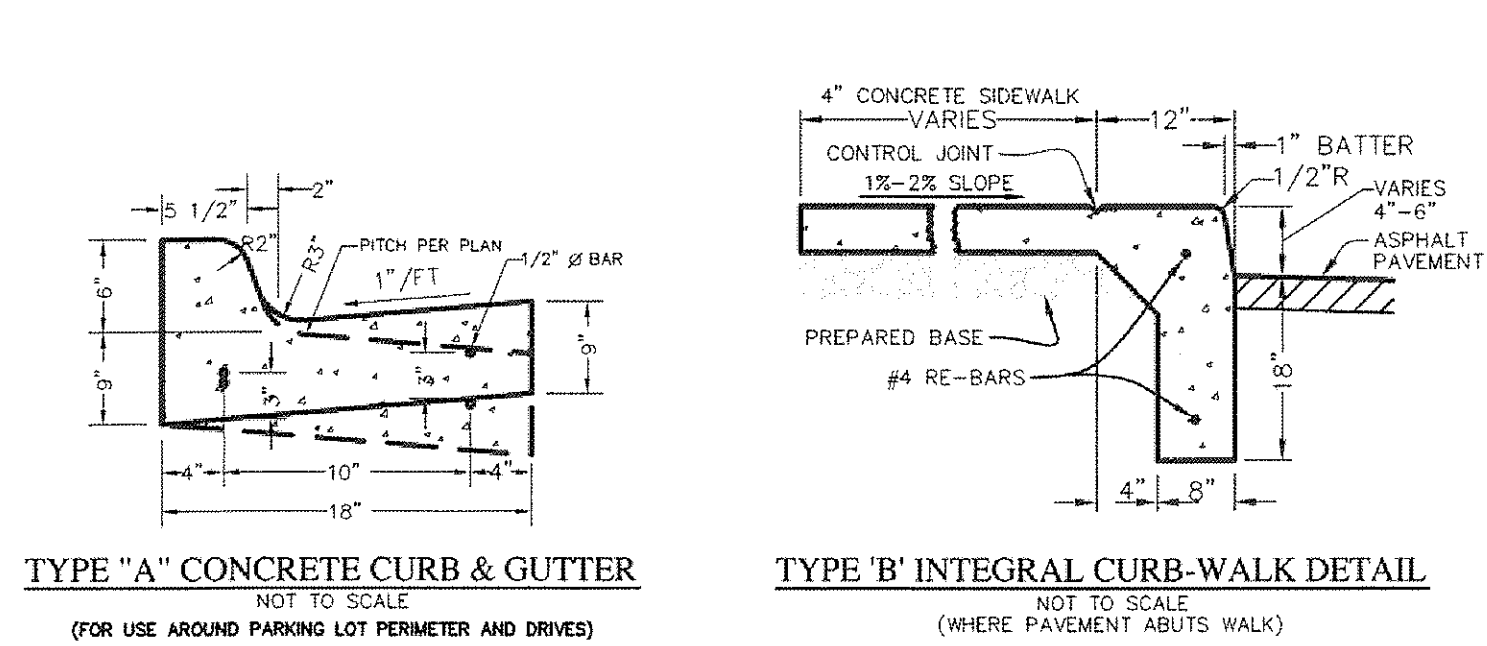
Average daily flow = 100 gpcpd x 4.48 people = 0.0007 cfs
(7.5 x 24 x 3600)

Peak daily flow = 4 x 0.0007 = 0.0028 cfs

An 10" sewer at 0.28% (minimum) has a capacity of 1.15 cfs.

STORM SEWER NOTES:

1. PROPOSED STRUCTURE COVERS/GRATES SHALL BE PROVIDED AS REQUIRED ON THE CITY OF ROCHESTER HILLS STANDARD DETAIL SHEETS.
2. EDGE DRAIN TO BE 20" IN EACH DIRECTION AT 90° ANGLES FROM INLET STRUCTURES LOCATED IN PAVED AREAS.
3. STRUCTURAL CALCULATIONS AND SHOP DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER (REGISTERED IN THE STATE OF MICHIGAN) SHALL BE SUBMITTED TO THE CITY FOR REVIEW PRIOR TO CONSTRUCTION OF ALL STORM SEWER STRUCTURES GREATER THAN 6 FEET IN DIAMETER.
4. PROPOSED ROOF DRAINS SHALL BE SCHEDULE 40 PVC PIPE WITH CHEMICALLY WELDED JOINTS.
5. PROPOSED STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS IV WITH RUBBER GASKETS AND CLASS B BEDDING.



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
OWNER REVIEW	7-12-13	JJW									
PER CITY REVIEW	9/9/13	SRB									
PER CITY REVIEW	10/2/13	SRB									

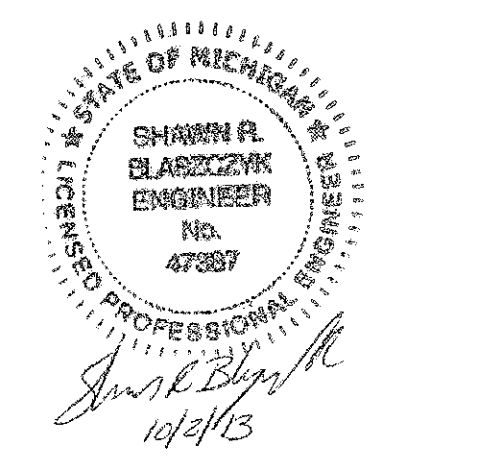
ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
5580 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

MISS DIG SYSTEM
THREE FULL WORKING DAYS BEFORE YOU DIG. CALL THE MISS DIG SYSTEM 1-800-482-7171

PROJECT SPONSOR:
MICHAEL BOGGIO ASSOC., ARCHITECTS
30100 TELEGRAPH ROAD, SUITE 216
BINGHAM FARMS, MI 48025

NOTES
PROPOSED RETAIL BUILDING
ROCHESTER HILLS, MICHIGAN

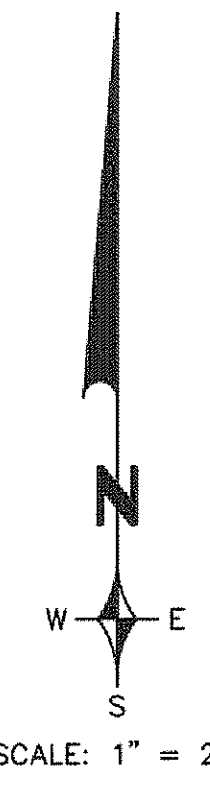
DATE: 7/10/13 SCALE: HOR. 1" = 20'
DESIGNED BY: SRB VER. 1" = 1/2" A
JOB NO. 13125
DRAWN BY: SRB SHEET PCE-1



NOT FOR CONSTRUCTION
CITY FILE 13-011, SECT. 14

**LEGEND
PROPOSED**

- MANHOLE
 - CATCH BASIN
 - INLET
 - CLEANOUT
 - ⊕ END SECTION
 - ⊕ ROOF DRAIN
 - ⊕ GATE VALVE
 - ⊕ HYDRANT
 - ⊕ WATER SHUT-OFF
 - ⊕ TREE REMOVAL
 - SANITARY SEWER
 - STORM SEWER
 - WATER MAIN
 - DITCH
 - CONTOUR MAJOR
 - CONTOUR MINOR
- PROPOSED GRADE
- T/C = TOP OF CURB
T/W = TOP OF WALK
T/P = TOP OF PAVEMENT
G = GROUND
D = DITCH
GU = GUTTER
FG = FINISH GRADE
FF = FINISH FLOOR



EROSION CONTROL LEGEND

- GEOTEXTILE SILT FENCE
- ▭ GRAVEL MUD TRACKING MAT
- REAR YARD INLET FILTER
- PAVEMENT INLET FILTER
- SO-2 BASIN OUTLET FILTER

BENCHMARKS:

- ARROW ON HYDRANT AT NORTHEAST CORNER OF JOHN R AND AVON ROADS. ELEVATION 774.46
- ARROW ON HYDRANT AT SOUTHWEST CORNER OF JOHN R AND AVON ROADS. ELEVATION 773.65

GRADING NOTES:

- EXISTING TOPOGRAPHY SHOWN PER SURVEY BY OTHERS AS PROVIDED BY OWNER AND SUPPLEMENTED BY ZWA.
- SEED AND MULCH ALL AREAS DISTURBED DUE TO GRADING.
- PEAT, OR ANY OTHER UNSUITABLE MATERIALS ENCOUNTERED IN CONSTRUCTION AREAS SHALL BE REMOVED AND BACKFILLED WITH COMPACTED SUITABLE MATERIAL (95% DENSITY). ALL ON-SITE WORK SHALL CONFORM, AT A MINIMUM, TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS.
- ALL WORK WITHIN THE CONSTRUCTION LIMITS SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY.
- ALL PROPOSED GRADES SHOWN IN PAVED AREAS ARE TOP OF PAVEMENT (T/P) UNLESS SPECIFIED OTHERWISE.
- ADD 700.00 TO PROPOSED GRADES TO OBTAIN SITE DATUM ELEVATION.

LEGEND

- EX. STORM SEWER
- EX. SANITARY SEWER
- EX. WATER MAIN
- EX. GAS LINE
- EX. UNDER GROUND UTILITY OVERHEAD LINES
- FENCE
- RAILROAD TRACKS
- EASEMENT
- SEABOX
- CENTER LINE
- MAIL BOX
- UNIDENTIFIED STRUCTURE
- LIGHT POLE
- TELEPHONE RISER
- STREET SIGN
- WATER SHUT OFF VALVE
- EXISTING CONTOUR
- EXISTING GROUND SHOT
- AS BUILT ELEVATION
- GRAVEL P.W.M.T.
- ASPH. P.W.M.T.

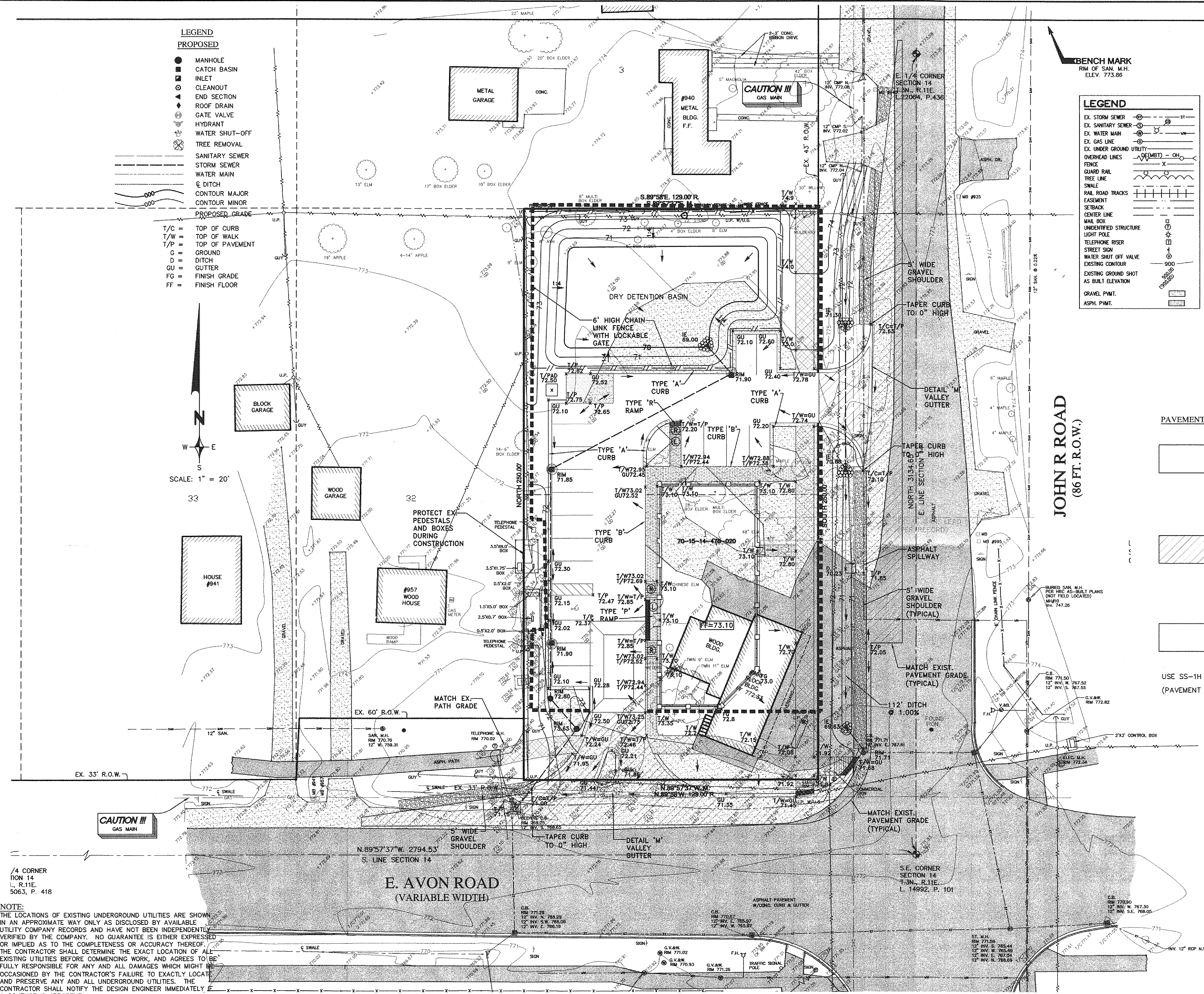
PAVEMENT SPECIFICATIONS:

- ON-SITE ASPHALT:**
2.0" M.D.O.T. HMA 4C, 20AA
2.0" M.D.O.T. HMA 3C, 20AA
6" 21AA AGGREGATE BASE
(COMPACTED TO 95% MAX. UNIT DENSITY)
- CONCRETE SIDEWALK:**
4" (3500 PSI) CONCRETE
ON 6" SAND BASE
(COMPACTED TO 95% MAX. UNIT DENSITY)

(THICKENED SIDEWALK TO BE 6" CONCRETE ON 6" SAND BASE)
- RIGHT-OF-WAY ASPHALT:**
2.0" M.D.O.T. HMA 4C, 20AA
3.0" M.D.O.T. HMA 3C, 20AA
4.0" M.D.O.T. HMA 2C, 20AA
COMPACTED SUITABLE BASE
(COMPACTED TO 95% MAX. UNIT DENSITY)
- ASPHALT BIKE PATH:**
2" HMA 36A
4" 21AA AGGREGATE BASE
(COMPACTED TO 97% MAX. UNIT DENSITY)

* 4" HMA 13A IN 2 LIFTS THROUGH DRIVEWAYS
- CONCRETE DUMPSTER PAD:**
6" REINFORCED CONCRETE
6" 21AA AGGREGATE BASE
(COMPACTED TO 95% MAX. UNIT DENSITY)
- GRAVEL SHOULDER:**
8" MDOT 23A AGGREGATE
(COMPACTED TO 95% MAX. UNIT DENSITY)

USE SS-1H @ 0.10 GAL./S.Y. BOND COAT BETWEEN ASPHALT LIFTS
(PAVEMENT SECTIONS SUBJECT TO RECOMMENDATION OF A QUALIFIED GEOTECHNICAL ENGINEER)



NOTE:
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REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
OWNER REVIEW	7-12-13	JJW						
PER CITY REVIEW	9/9/13	SRB						
PER CITY REVIEW	10/2/13	SRB						

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Civil Engineers & Land Surveyors
5500 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48163
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwoznak.com

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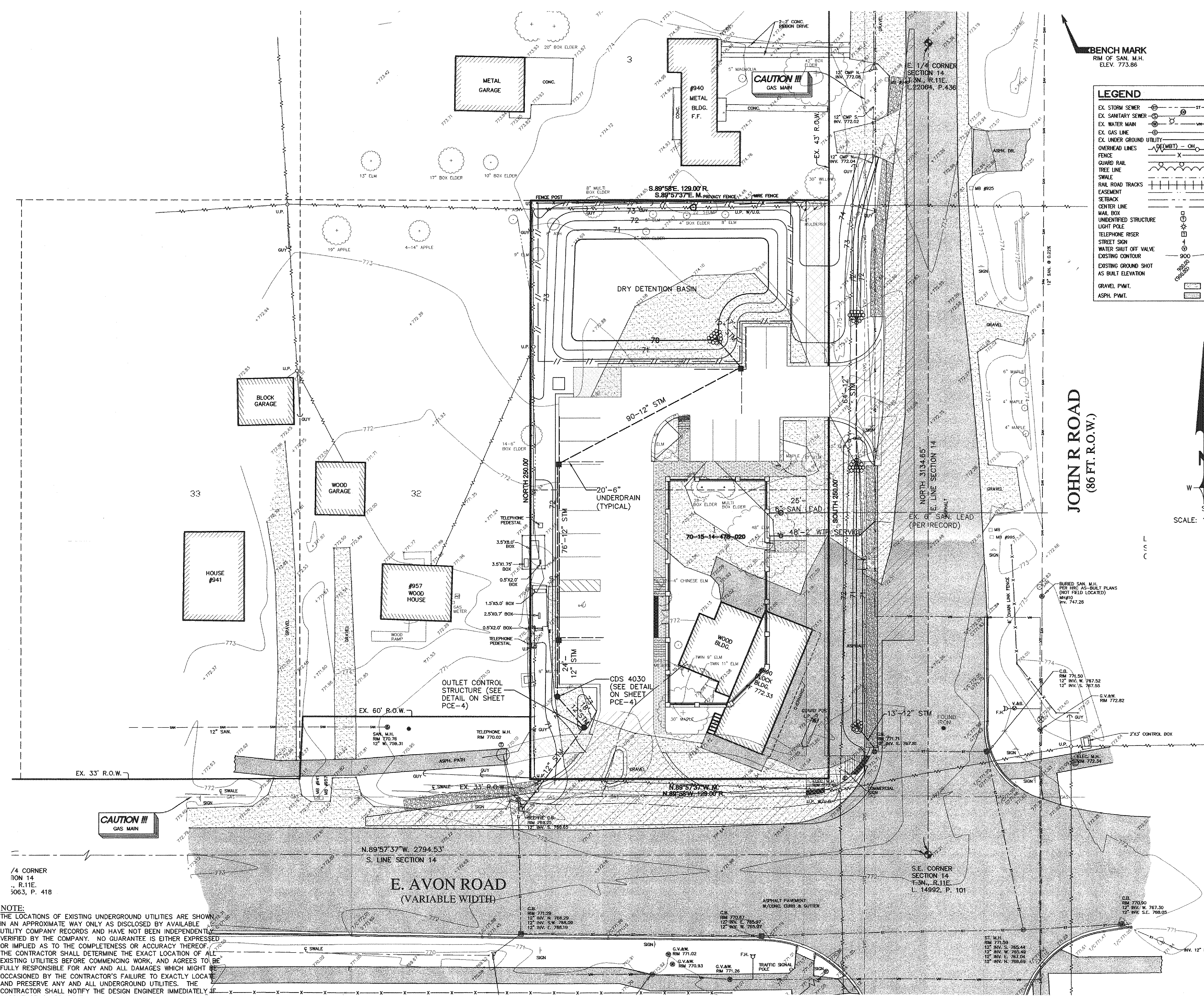
PROJECT SPONSOR:
MICHAEL BOGGIO ASSOC., ARCHITECTS
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BINGHAM FARMS, MI 48025

**SITE GRADING AND DRAINAGE
PROPOSED RETAIL BUILDING**
ROCHESTER HILLS, MICHIGAN

STATE OF MICHIGAN
SHAWN R. BLASZCZYK
ENGINEER
NO. 47387
PROFESSIONAL ENGINEER
10/12/13

NOT FOR CONSTRUCTION
CITY FILE 13-011, SECT. 14
DATE: 10/7/13
SCALE: HOR: 1" = 20'
VER: 1" = N/A
JOB NO.: 13125
DESIGNED BY: SRB
DRAWN BY: ---
SHEET: PCE-2

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BENCH MARK
RIM OF SAN. M.H.
ELEV. 773.86

LEGEND

EX. STORM SEWER	—○—
EX. SANITARY SEWER	—○—
EX. WATER MAIN	—○—
EX. GAS LINE	—○—
EX. UNDER GROUND UTILITY	—○—
OVERHEAD LINES	—○—
FENCE	—X—
RAIL	—X—
TREE LINE	—X—
SWALE	—X—
RAIL ROAD TRACKS	—X—
EASEMENT	—X—
SETBACK	—X—
CENTER LINE	—X—
MAIL BOX	—X—
UNIDENTIFIED STRUCTURE	—X—
LIGHT POLE	—X—
TELEPHONE RISER	—X—
STREET SIGN	—X—
WATER SHUT OFF VALVE	—X—
EXISTING CONTOUR	—X—
EXISTING GROUND SHOT	—X—
AS BUILT ELEVATION	—X—
GRAVEL P.W.M.T.	—X—
ASPH. P.W.M.T.	—X—

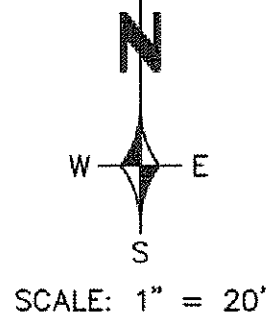
LEGEND

PROPOSED

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- △ END SECTION
- ◇ ROOF DRAIN
- ◆ GATE VALVE
- ⊕ HYDRANT
- ⊖ WATER SHUT-OFF
- ⊗ TREE REMOVAL
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- DITCH
- CONTOUR MAJOR
- CONTOUR MINOR
- x99.0 PROPOSED GRADE
- T/C = TOP OF CURB
- T/W = TOP OF WALK
- T/P = TOP OF PAVEMENT
- G = GROUND
- D = DITCH
- GU = GUTTER
- FG = FINISH GRADE
- FF = FINISH FLOOR

GENERAL NOTES:

- M.D.O.T. CLASS II BACKFILL TO BE COMPACTED IN 6" LAYERS TO 95% OF MAXIMUM UNIT WEIGHT, ABOVE REQUIRED UNDER OR WITHIN A 1 ON 1 SLOPE OF EXISTING OR PROPOSED PAVEMENT.
- ALL CONTRACTORS SHALL NAME ZEIMET-WOZNAK & ASSOCIATES AS ADDITIONALLY INSURED ON ALL INSURANCE POLICIES.



1/4 CORNER
ION 14
... R.11E.
5063, P. 418

NOTE:
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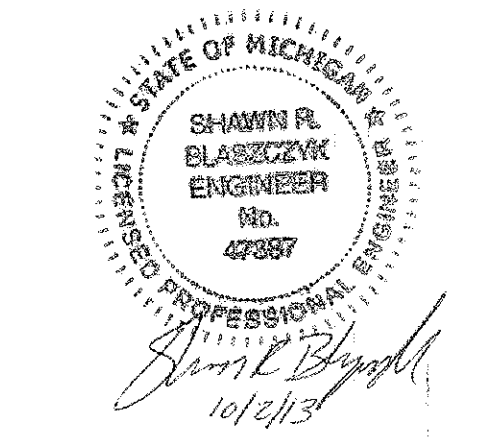
REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
OWNER REVIEW	7-12-13	JJW									
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SITE UTILITIES
PROPOSED RETAIL BUILDING
ROCHESTER HILLS, MICHIGAN



NOT FOR CONSTRUCTION
CITY FILE 13-011, SECT. 14

DATE	7/10/13	SCALE	HOR: 1" = 20'
DESIGNED BY	SRB	JOB NO.	13125
DRAWN BY	SRB	SHEET	PCE-3

Preliminary Stormwater Management Calculations

Proposed Retail Building at John R and Avon Roads, Rochester Hills, MI

The existing parcel, 0.74 acres, is to be redeveloped into a new 4,000 s.f.t. retail building with associated parking and drives. The parcel has been previously used for a retail store. The existing building and gravel drive/parking are to be removed. There is no detention currently provided and all stormwater sheet flows into the adjoining rights-of-way. There are two available 12" storm outlets, one at the southwest corner of the site and the other at the southeast corner of the site within John R. Both outlets are under jurisdiction of the Oakland County Water Resource Commissioner (OCWRC). Based on the site configuration, the southwest outlet shall be used.

Storage Requirements

- OCWRC standards require detention for a 100-year storm event. Using the current OCWRC design, the required detention for this site shall be as follows.

A = 0.74 acres (32,250 sf)
Runoff, C:

Building = 4116 sf	@ 0.95 =	3910
Pavement = 11468 sf	@ 0.95 =	10895
Lawn = 16666 sf	@ 0.30 =	5000
		19805

C = 19805/32250 = 0.61 Use C = 0.70

$Q_0 = 0.20 \text{ cfs/acre} \times 0.74 \text{ acres} = 0.148 \text{ cfs}$
 $Q_0 = 0.148 / (0.74 \times 0.70) = 0.286 \text{ cfs/acre-imp.}$
 $T_{25} = 25 + 10312.5 / 0.286 = 164.89 \text{ minutes}$
 $T_{100} = 25 + 10312.5 / 0.286 = 164.89 \text{ minutes}$
 $V_{100} = [(16500 \times 164.89) / (25 + 164.89)] - (40 \times 0.286 \times 164.89) = 12,441.3 \text{ cf/acre-imp.}$
 $V_{100} = 12,441.3 \times 0.74 \times 0.70 = \mathbf{6,445 \text{ cf}}$

- The City of Rochester Hills stormwater management standards require detention for the 25-year storm event. Using the current Rochester Hills design, the required detention from this site shall be as follows.

A = 0.74 acres
C = 0.70

$Q_0 = 0.20 \text{ cfs/acre} \times 0.74 \text{ acres} = 0.148 \text{ cfs}$
 $Q_0 = 0.148 / (0.74 \times 0.70) = 0.286 \text{ cfs/acre-imp.}$
 $T_{25} = 25 + 18062.5 / 0.286 = 142.9 \text{ minutes}$
 $V_{25} = [(12900 \times 142.9) / (25 + 142.9)] - (40 \times 0.286 \times 142.9) = 9,344.4 \text{ cf/acre-imp.}$
 $V_{25} = 9,344.4 \times 0.74 \times 0.70 = \mathbf{4,840 \text{ cf}}$

The stormwater management system shall be designed as a dry detention basin. The runoff shall be collected by a system of catch basins and storm sewer pipes which shall discharge to the basin by back flowing through the pipes. This shall be achieved by placing an outlet control structure at the downstream end of the sewer system just upstream of the connection to the existing outlet.

Detention Available

Elevation	Area (sf)	Avg. Area (sf)	Depth (ft)	Volume (cf)
769	0	1663	1	1663
770	3327	3862	1	3862
771	4396			5525

By interpolation, at elevation 770.9 a volume of 5,139 cf is available. This is 80% of the 100-year storage and 106% of the 25-year storage.

Bottom of basin =	769.00 (outlet elevation)
Top of 25-yr. storage =	770.90
Freeboard =	771.90

Stormwater Quality

Due to site constraints, the use of a forebay to provide stormwater quality is not feasible. Therefore, a mechanical treatment device shall be placed upstream of the outlet control structure. The mechanical treatment device shall be capable of treating the 1-year storm event with an internal by-pass for the larger storm events.

$Q = CIA$
 $C = 0.70$
 $A = 0.74 \text{ acres}$
 $I = 72 / (T + 25), T_c = 15 \text{ minutes}$
 $I = 72 / (15 + 25) = 1.80$

$Q = 0.70 \times 1.80 \times 0.74 = 0.93 \text{ cfs}$

Use a CDS PMSU 4030, with a treatment capacity of 1.41 cfs.

Outlet Control Structure

The outlet control structure shall be designed to control the discharge from the site to an "agricultural" rate of 0.20 cfs/acre by use of a restrictor pipe through a weir in the control structure.

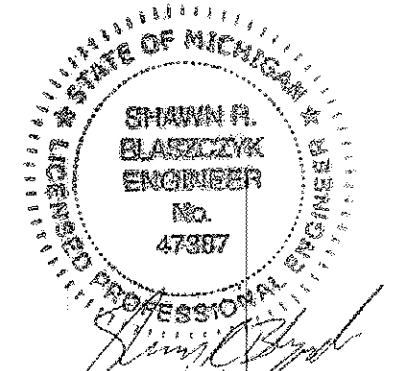
Size Restrictor:
 $Q_0 = 0.20 \text{ cfs/acre} \times 0.74 \text{ acres} = 0.148 \text{ cfs}$
 $H = 770.9 - 769.0 = 1.90'$
 $Q = 0.62A(2gH)^{1/2}$
 $0.148 = 0.62A(2 \times 32.2 \times 1.90)^{1/2}$
 $A = 0.0216 \text{ sf}$

This equates to a 1.98" diameter orifice. The minimum allowable outlet pipe is 4". Therefore, use a 4" diameter orifice with a 4" capped tee. Drill a 1.90" diameter hole into the bottom cap of the tee to act as the restrictor.

Actual Discharge:

$Q = 0.62A(2gH)^{1/2}$
 $A = 0.0197 \text{ sf (1.90" diameter)}$
 $H = 1.90'$

$Q = 0.62(0.0197)(2 \times 32.2 \times 1.90)^{1/2} = 0.14 \text{ cfs} < 0.148 \text{ cfs allowable}$



NOT FOR CONSTRUCTION
CITY FILE 13-011, SECT. 14

PLAN VIEW
N.T.S.

CDS4030 DESIGN NOTES

CDS4030 RATED TREATMENT CAPACITY IS 4.5 CFS, OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY IS 30.0 CFS. IF THE SITE CONDITIONS EXCEED 30.0 CFS, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

THE STANDARD CDS4030 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

DESIGNATION (MODEL SUFFIX)	CONFIGURATION DESCRIPTION
G	GRATED INLET ONLY (NO INLET PIPE)
GP	GRATED INLET WITH INLET PIPE OR PIPES
K	CURB INLET ONLY (NO INLET PIPE)
KP	CURB INLET WITH INLET PIPE OR PIPES
B	SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
W	SEDIMENT WEIR FOR NUDEP / NJCAT CONFORMING UNITS

SECTION A-A
N.T.S.

FRAME AND COVER
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WATER QUALITY FLOW RATE (CFS)	PEAK FLOW RATE (CFS)	RETURN PERIOD OF PEAK FLOW (YRS)	SCREEN APERTURE (2400 OR 4700)

PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			

RIM ELEVATION	WIDTH	HEIGHT

NOTES/SPECIAL REQUIREMENTS:
* PER ENGINEER OF RECORD

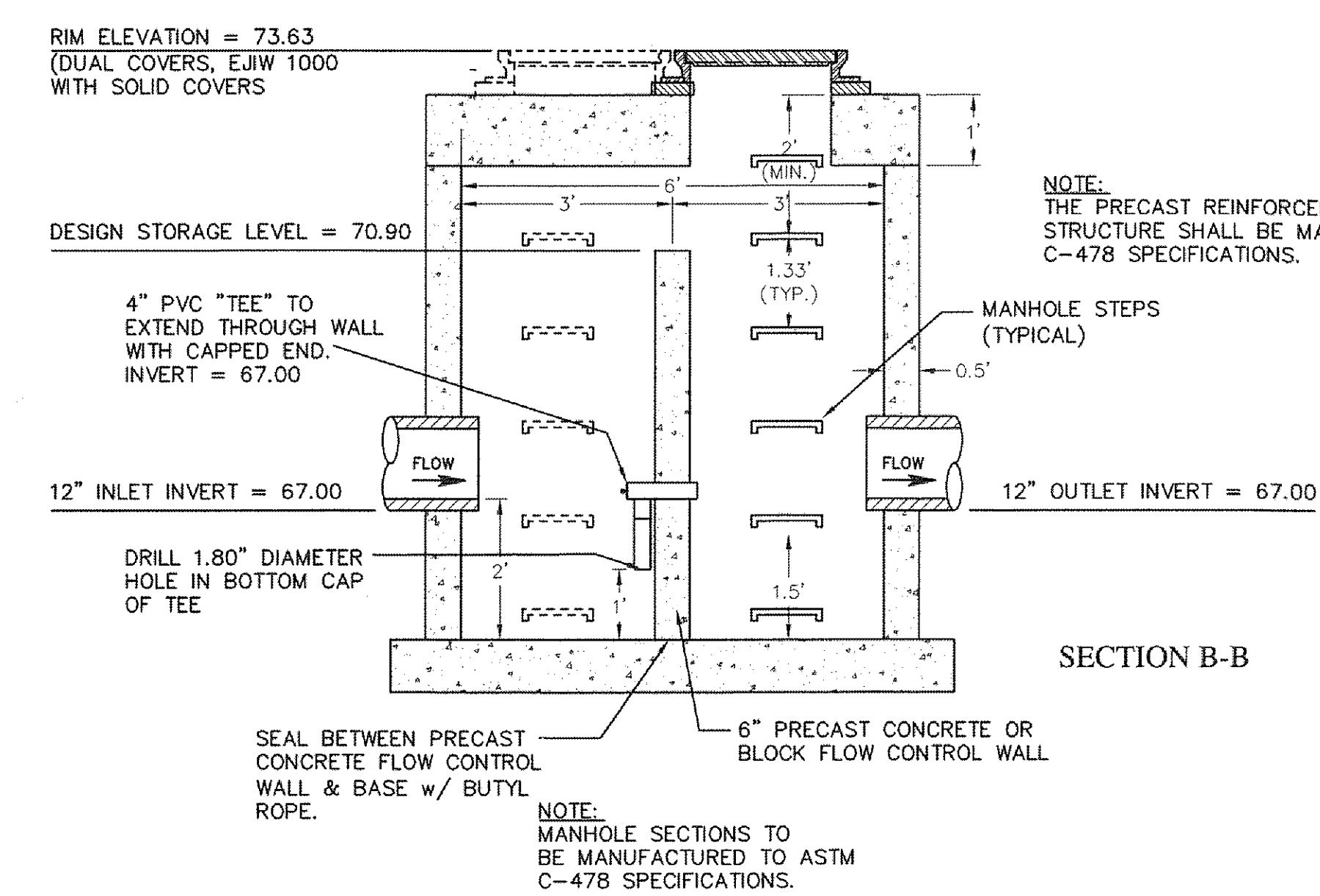
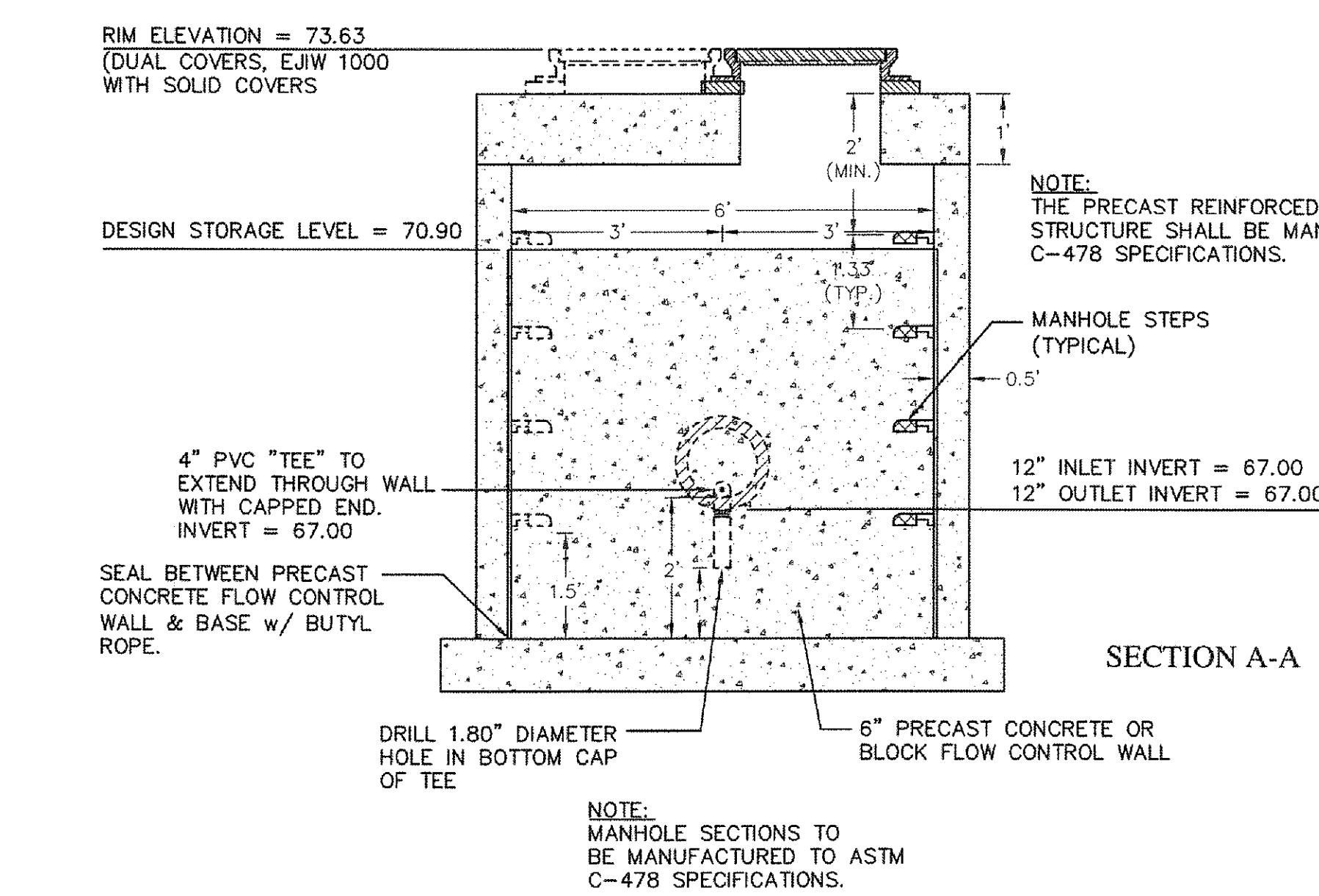
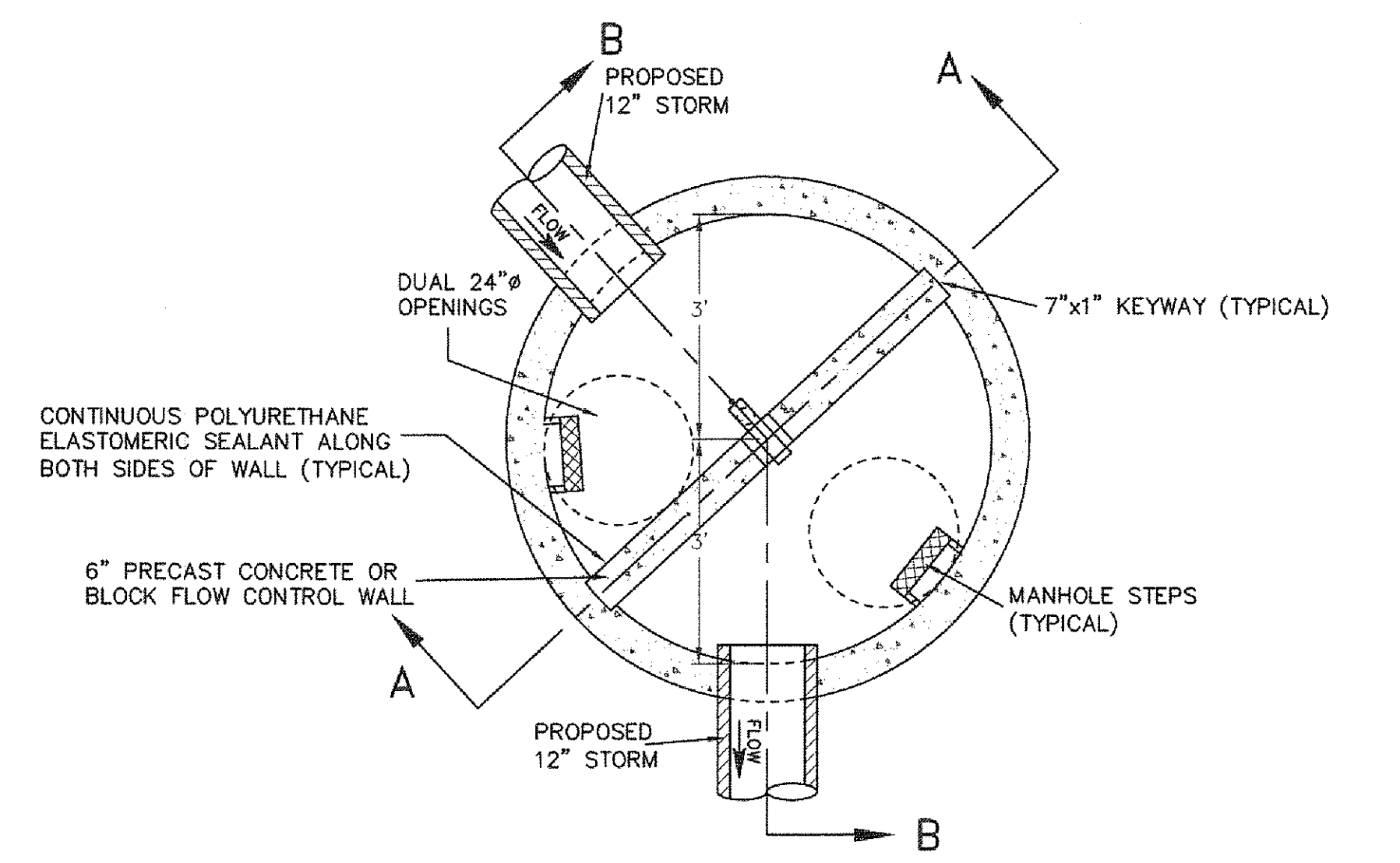
GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH STORMWATER SOLUTIONS REPRESENTATIVE. www.contechstormwater.com
- CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE AND CASTINGS SHALL MEET AASHTO HS20 LOAD RATING.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CDS4030
PRECAST CONCRETE WATER QUALITY SYSTEM
STANDARD DETAIL



REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY
OWNER REVIEW	7-12-13	JW						
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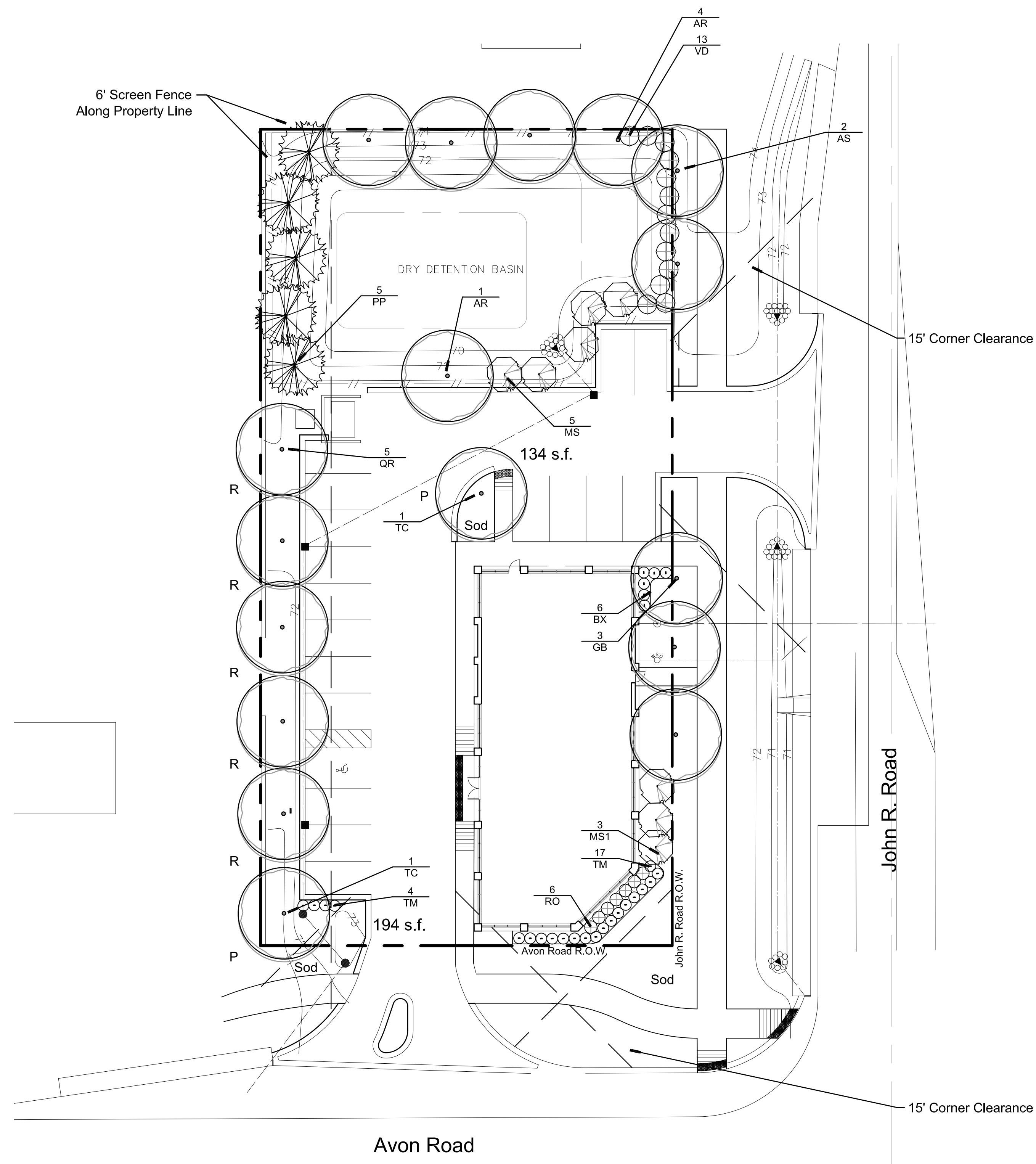
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PROJECT SPONSOR:
MICHAEL BOGGIO ASSOC., ARCHITECTS
30100 TELEGRAPH ROAD, SUITE 216
BINGHAM FARMS, MI 48025

STORMWATER MANAGEMENT
PROPOSED RETAIL BUILDING
ROCHESTER HILLS, MICHIGAN

DATE: 7/10/13	SCALE: HOR: 1" = 20'	DESIGNED BY: SRB	JOB NO.: 13125
DRAWN BY: SRB	SHEET: PCE-4		

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Landscape Summary

Parking Lot Landscaping	8,351 s.f.
Vehicular Use Area	418 s.f. (8,351 x 5%)
Landscape Area Required	324 s.f.*
Trees Required	2.8 Trees (418 / 150)
Trees Provided	2 Trees
Right of Way Landscaping**	
John R. Road	
Frontage	223 l.f.
Trees Required	6.4 Trees (1 per 35')
Trees Provided	5 Trees (Payment to Tree Fund)
Ornamental Trees Required	6.4 Trees (1 per 35')
Ornamental Trees Provided	3 Trees (Payment to Tree Fund)
Avon Road**	
Frontage	112 l.f.
Trees Required	3.2 Trees (1 per 35')
Trees Provided	0 (Payment to Tree Fund)
Ornamental Trees Required	3.2 Trees (1 per 35')
Ornamental Trees Provided	0 (Payment to Tree Fund)
Detention Pond	
Freeboard Length	304 l.f.
Trees Required	4.56 Trees (1.5 per 100')
Trees Provided	5 Trees
Evergreens Required	4.56 Trees (1.5 per 100')
Evergreens Provided	5 Trees
Shrubs Required	12.1 Shrubs (4 per 100')
Shrubs Provided	13 Shrubs

* As measured from the back of curb and Excluding Sidewalks.
 ** ROW Plantings will Require a RCOC Permit. If the Permit is Not Granted, the Value of Required Trees Shall be Placed in the City Tree Fund.

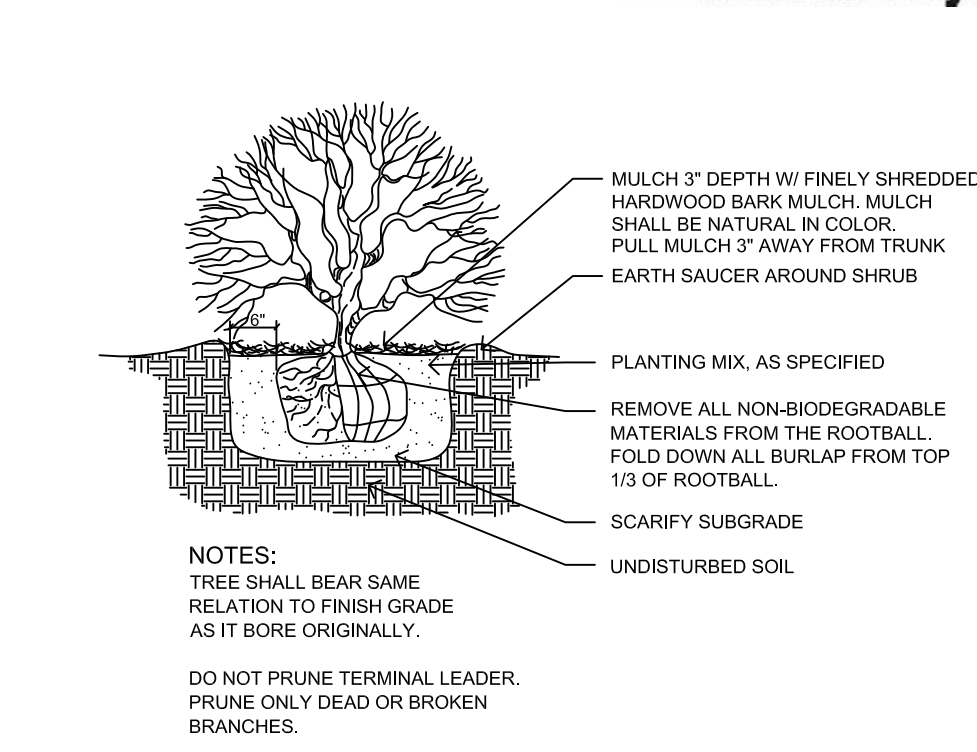
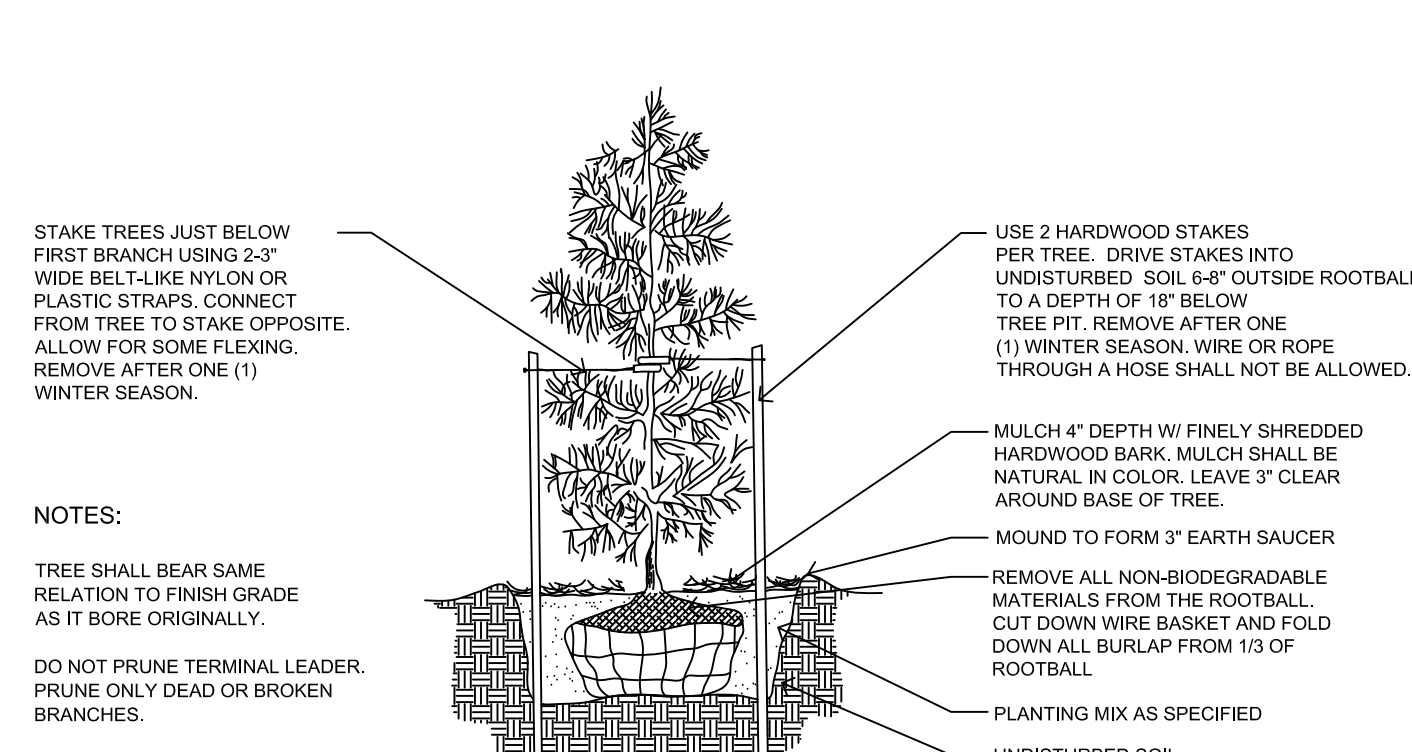
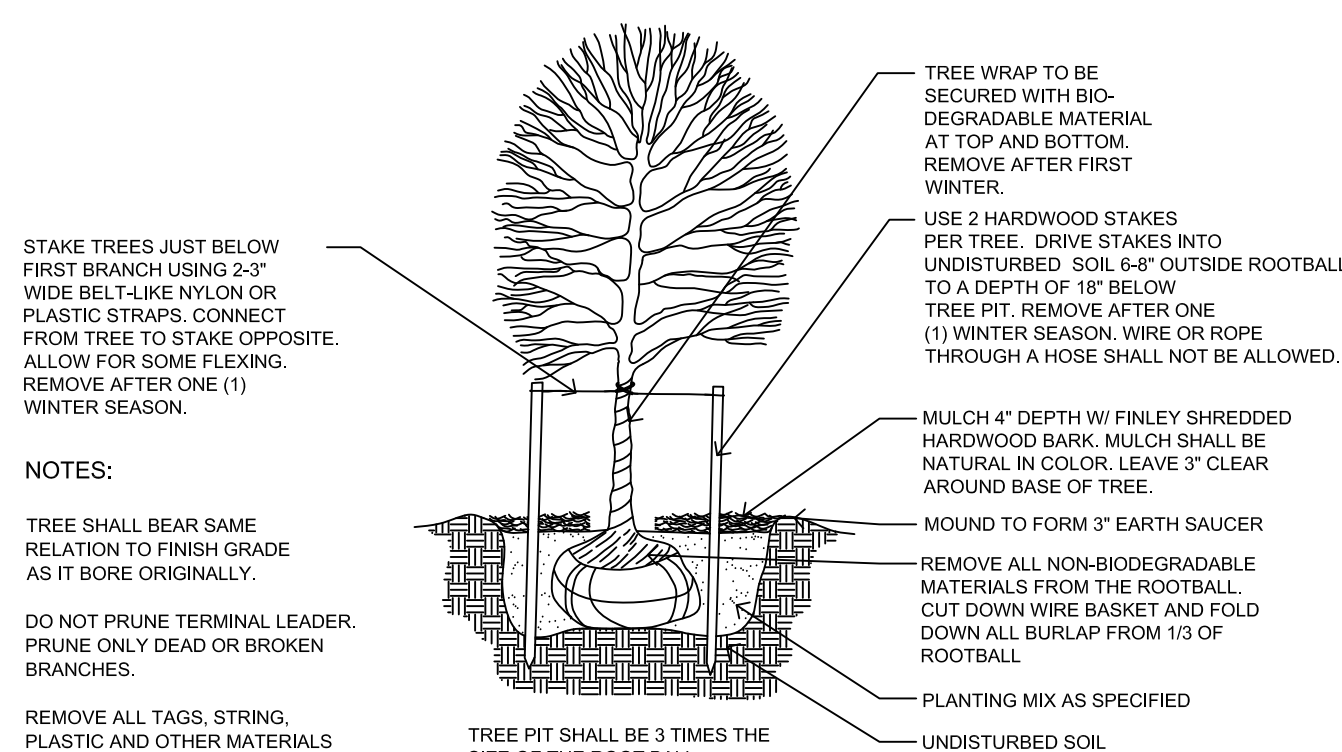
- Additional Notes:**
- All Landscaped Areas Shall be Irrigated with an Automatic, Underground System.
 - Islands Shall be Sod.
 - Owner Shall be Responsible for Replacing Damaged Plant Material Due to Utility Maintenance.
 - Prior to the release of the Performance Bond, the City of Rochester Hills Forestry Division must inspect all landscape plantings including but not limited to existing trees, replacement trees, buffer plantings, and parking lot islands and the Forestry Division must inspect all right-of-ways to identify any plantings new or existing that pose a hazard to the safe use of the right-of-way. Forestry may require the developer to remove and possibly replace any such trees.
 - All trees and shrubs must be planted at least 10' from the edge of a public roadway. Shade trees and shrubs must be planted at least 5' from the edge of a public roadway. Evergreen and ornamental trees must be planted at least 10' from the edge of a public roadway. All trees and shrubs must be planted at least 10' from any fire hydrant. Shade and evergreen trees must be planted at least 15' from the nearest overhead wire and at least 10' from the nearest underground utility.
 - No tree or shrub may be planted within the triangular area formed at the intersection of any street right-of-way at a distance of 20' from their point of intersection. No tree or shrub may be planted in the triangular area formed at the intersection of any driveway with a public sidewalk at a distance along each line of 15' from their point of intersection.
 - Prior approval is required to plant any tree or shrub in the public right-of-way.
 - No substitutions or changes of location or plant types shall be made without the approval of the developer and the City of Rochester Hills Landscape Architect. City's Landscape Architect has Final Right of Approval for the Release of the Performance and Maintenance Bonds.
 - The developer and/or the City of Rochester Hills Landscape Architect shall have the right, at any stage of the installation, to reject any work or material that does not meet the requirements of the plans or specifications.
 - Replacement trees may not be planted within the drip line of existing trees.
 - Trees must be at least 10' from underground utilities and 15' from overhead utilities.
 - Trees may not be planted within 4' of any property line.
 - Prior to Release of the Performance Bond, the City of Rochester Hills Must Inspect all Landscape Plantings Including but not Limited to Existing trees, Replacement Trees, Buffer Plantings, and Parking Lot Islands in accordance with the City's Watering Ordinances.
 - Irrigation Shall Only Occur Between the Hours of 12am and 5am in accordance with the City's Watering Ordinances.
- Utility Maintenance Statement:**
 If, in the event, Utility Maintenance Results in the Removal of Landscaping, as Shown on this Plan, it will be the Owner's Responsibility to Repair and Replace Shrubs and Trees that are Located within the Utility Easements.

Plant List

sym	qty	botanical name	common name	caliper	spacing	root	height	price	total
Parking Lot Island Trees									
TC	2	Tilia cordata 'Greenspire'	Greenspire Linden	3.0"	as shown	B&B		\$ 425.00	\$ 850.00
Parking Lot Island Trees Paid into Tree Fund									
1		Deciduous Tree		3.0"				\$ 425.00	\$ 425.00
Right of Way Trees									
AS	2	Acer saccharum	Sugar Maple	3.0"	as shown	B&B		\$ 425.00	\$ 850.00
GB	3	Ginkgo biloba	Ginkgo	3.0"	as shown	B&B		\$ 425.00	\$ 1,275.00
MS1	3	Malus sargentii	Sargent Crab	2.0"	as shown	B&B		\$ 200.00	\$ 600.00
Right of Way Trees Paid into City Tree Fund									
4		Deciduous Tree		3.0"				\$ 425.00	\$ 1,700.00
6		Ornamental Tree		2.0"				\$ 200.00	\$ 1,200.00
General Plantings									
AR	5	Acer rubrum	Red Maple	3.0"	as shown	B&B		\$ 425.00	\$ 2,125.00
BX	6	Buxus sempervirens 'Green Gem'	Green Gem Boxwood	3.0"	as shown	B&B	30"	\$ 50.00	\$ 300.00
MS	5	Malus sargentii	Sargent Crab	2.0"	as shown	B&B		\$ 200.00	\$ 1,000.00
RO	7	Rosa radrazz	Anthony Waterer Spirea	as shown	as shown		30"-36"	\$ 50.00	\$ 350.00
TM	21	Taxus x media 'Densiformis'	Dense Yew	as shown	as shown		30"-36"	\$ 50.00	\$ 1,050.00
PP	5	Picea pungens	Colorado Spruce	as shown	B&B	8'		\$ 300.00	\$ 1,500.00
584		Kentucky Blue Grass, (S.Y.) Irrigation System						\$ 4.00	\$ 2,336.00
									\$ 15,000.00
									\$ 30,561.00
Replacement Trees									
QR	5	Quercus rubra	Red Oak	3.0"	as shown	B&B		\$ 425.00	\$ 2,125.00
	5	trees, 10 credits							\$ 2,125.00
									\$ 2,125.00
Replacement Trees Paid into City Tree Fund									
7		Deciduous Trees		3.0"				\$ 425.00	\$ 2,975.00
1		Deciduous Tree		2.5"				\$ 375.00	\$ 375.00
		15 credits							\$ 3,350.00
									\$ 5,475.00



Know what's below.
Call before you dig.

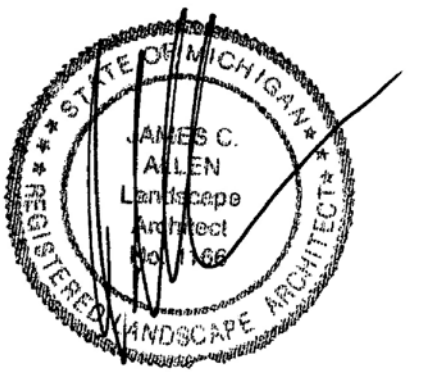


LANDSCAPE REQUIREMENTS

- The work shall consist of providing all necessary materials, labor, warrants, equipment, tools and supervision for the completion as shown on the drawings.
 - The plant materials shall conform to type stated on the plant list. Sizes shall be the minimum stated on the plant list or larger. All measurements shall be in accordance with the latest edition of the "A.N.S. Standard for Nursery Stock".
 - The plant material shall be nursery grown and inspected by the owner's representative before planting. The owner's representative reserves the right to reject any plant material at any time.
 - Plants designated "B & B" shall be balled and burlapped with firm bales of earth.
 - The contractor is responsible for planning the materials at the correct grades and spacing. The plants shall be oriented as to give the best appearance.
 - When the plant has been properly set, the pit shall be backfilled with a topsoil mixture, gradually filling, patting and setting with water.
 - All plant materials shall be pruned and injuries repaired. The amount of pruning shall be limited to the removal of dead or injured twigs and to compensate for the loss of roots from transplanting. Cuts should be flush, leaving no stubs. Over 1" shall be painted with tree paint.
 - The contractor agrees to guarantee all plant materials for the period of two years. At that time the owner's representative reserves the right for a final inspection. Plant material with 25% die back, as determined by the owner's representative shall be replaced. This guarantee includes the furnishing of new plants, labor and materials. These new plants shall also be guaranteed for the period of one year.
 - Topsoil shall be a friable, fertile topsoil of clay loam character containing at least 5% but not more than 20% by weight of organic matter with a PH range from 6.0 to 7.0. Soil shall be free from clay lumps, coarse sand, plant roots, sticks and other foreign materials.
 - Seed mix shall consist of the following types and proportions: Kentucky Blue Grass - "Banner/Cheradespire" 60% Cheering Cheering Fescue 15% Creeping Reed Fescue 15% Perennial Rye Grass 10%. Weed content shall not exceed 1%. The mix shall be applied at a rate of 200 lbs./acre
 - Soil shall be two year old "Banner/Cheradespire" Kentucky Blue Grass grown in a sod nursery on loam soil.
 - The Contractor shall verify all rights of way, easements, property lines and limits of work, etc. prior to commencing work.
 - The Contractor shall be responsible for contacting and coordinating with all pertinent utility companies 72 hours in advance of any digging to make himself familiar with all underground utilities, pipes and structures. The Contractor shall take sole responsibility for any cost incurred due to damage of said utilities.
 - The Contractor shall not proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist. Such conditions shall be immediately brought to the attention of the owner's representative and/or Landscape Architect. The Contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
 - Any discrepancies between dimensioned layout and actual field conditions shall be reported to the Owner's representative and Landscape Architect. Failure to make such discrepancies known will result in Contractor's responsibility and liability for any changes and associated cost.
 - The Contractor to verify perpendicularity of all planting pits prior to installation of plant material.
- Overhead Line Statement:**
No Overhead Lines Exist
- Loading Area Statement:**
Proposed Landscaping and/or Walls Shall Adequately Screen Loading Areas From Public R.O.W.

Not to be Used as Construction Drawings

Seal:



Title:

Landscape Plan

Project:

Retail Building
Rochester Hills, Michigan

Prepared for:

Michael A. Boggio Associates
30100 Telegraph, Suite 216
Bingham Farms, MI 48025
248.258.5155

Revision:

Issued:

Site Plan Submission	July 15, 2013
Revised	August 29, 2013
Revised	October 2, 2013

Job Number:

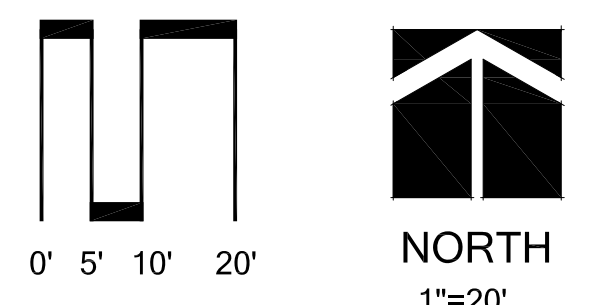
13-027

Drawn By:

Checked By:

jca

jca




Sheet No.

L-1

Symbol	Label	Catalog Number	Description	Lamp	Watts
☐	WA	WST LED 2 10A700/40K SR4 MVOLT	WST LED WITH 2 MODULES, 20 LED7s, 700mA DRIVER, 4000K COLOR TEMPERATURE, TYPE 4 LENS WALL MOUNTED 12' AFG	Outdoor Wall Pack Luminaire to IES LM-79- 08. LUMINAIRE OUTPUT: 3851 Lms.	47
☐ ●	SA	DSXO LED 20C 1000 30K T4M MVOLT HS	DSXO LED WITH (1) 20 LED LIGHT ENGINE, TYPE T4M OPTIC, 3000K, @ 1000mA WITH HOUSE SIDE SHIELD POLE MOUNTED 12' AFG	LED	72

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
ADJACENT RESIDENTIAL	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
PARKING/DRIVES	+	1.7 fc	5.2 fc	0.1 fc	52.0:1	17.0:1
PROPERTY LINE	×	0.0 fc	0.3 fc	0.0 fc	N/A	N/A



D-Series
Size 0
LED Area Luminaire

Specifications

- EPA: 12.96
- Length: 24"
- Width: 15"
- Height: 11"
- Weight: 15 lbs

Ordering Information

EXAMPLE: DSXO LED 40C 1000 42K T3M MVOLT SPA DDBXO

Option	Code	Description	Option	Description
Finish	00	White	Mounting	100
Light Source	100	LED	Mounting	200
Color	42K	42000K	Mounting	300
Beam Angle	60	60°	Mounting	400
Mounting	100	100	Mounting	500
Mounting	200	200	Mounting	600
Mounting	300	300	Mounting	700
Mounting	400	400	Mounting	800
Mounting	500	500	Mounting	900
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Mounting	4200	4200	Mounting	4600
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Mounting	6100	6100	Mounting	6500
Mounting	6200	6200	Mounting	6600
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Mounting	6600	6600	Mounting	7000
Mounting	6700	6700	Mounting	7100
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Mounting	7100	7100	Mounting	7500
Mounting	7200	7200	Mounting	7600
Mounting	7300	7300	Mounting	7700
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Mounting	7600	7600	Mounting	8000
Mounting	7700	7700	Mounting	8100
Mounting	7800	7800	Mounting	8200
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Mounting	8100	8100	Mounting	8500
Mounting	8200	8200	Mounting	8600
Mounting	8300	8300	Mounting	8700
Mounting	8400	8400	Mounting	8800
Mounting	8500	8500	Mounting	8900
Mounting	8600	8600	Mounting	9000
Mounting	8700	8700	Mounting	9100
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Mounting	9500	9500	Mounting	9900
Mounting	9600	9600	Mounting	10000

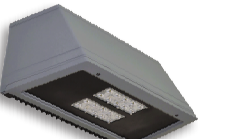
Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 65% and expected service life of over 100,000 hours.

Notes

1. Luminaire with standard 12' AFG mounting.
2. 12' AFG mounting is required for 12' AFG mounting.
3. Luminaire with standard 12' AFG mounting.
4. Luminaire with standard 12' AFG mounting.
5. Luminaire with standard 12' AFG mounting.
6. Luminaire with standard 12' AFG mounting.
7. Luminaire with standard 12' AFG mounting.
8. Luminaire with standard 12' AFG mounting.
9. Luminaire with standard 12' AFG mounting.
10. Luminaire with standard 12' AFG mounting.
11. Luminaire with standard 12' AFG mounting.
12. Luminaire with standard 12' AFG mounting.



WST LED
Architectural Wall Sconce

Specifications

- Height: 7.5" (193mm)
- Width: 16.5" (419mm)
- Depth: 5.5" (140mm)
- Weight: 17 lbs (7.7kg)

Ordering Information

EXAMPLE: WST LED 2 10A700/40K SR3 MVOLT DDBTXO

Option	Code	Description	Option	Description
Finish	00	White	Mounting	100
Light Source	100	LED	Mounting	200
Color	42K	42000K	Mounting	300
Beam Angle	60	60°	Mounting	400
Mounting	100	100	Mounting	500
Mounting	200	200	Mounting	600
Mounting	300	300	Mounting	700
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Mounting	9600	9600	Mounting	10000

Introduction

The classic Architectural Wall Sconce is now available with the latest in LED technology. The result is a long-life, maintenance-free product with typical energy savings of 75% compared to metal halide versions. The integral battery backup option provides emergency egress lighting, without the use of a backbox or remote gear as metal halide maintain their aesthetic integrity.

The WST LED is ideal for