



**McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS D.P.C.**

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**TOWN OF NEWBURGH
PLANNING BOARD
TECHNICAL REVIEW COMMENTS**

PROJECT: LAKESIDE SENIOR HOUSING
PROJECT NO.: 2016-19
PROJECT LOCATION: SECTION 86, BLOCK 1, LOT 39.22 & 39.23
REVIEW DATE: 14 APRIL 2017
MEETING DATE: 20 APRIL 2017
PROJECT REPRESENTATIVE: MEDENBACH AND EGGERS

1. The status of City of Newburgh Flow Acceptance letter should be reviewed.
2. Outlet control structures for all stormwater Best Management Practices should be added to the plans. Plans currently say see detail. No details are located.
3. NYSDEC permit for wetlands crossing is required.
4. Architectural review of the structures will be required. Architectural review plans and paper work should be submitted for the Boards review when complete.
5. Location of the generator in front of Building 2 along the drive aisle should be evaluated. Protection of the generator from traffic, snow plowing etc should be a consideration. Generator is also located over a sanitary sewer line which should be evaluated.
6. Engineering report for sanitary sewer pump station should be submitted detailing the design.
7. The Stormwater Management Report should be prepared as a Stormwater Pollution Prevention Plan with necessary reforms. Inspections, contractor certifications etc.

Respectfully submitted,

**McGoey, Hauser and Edsall
Consulting Engineers, D.P.C.**

Patrick J. Hines
Principal
PJH/kbw

LOT 39.22
5.16 AC

LOT 39.23
14.07 AC

BUILDING #1 (36 UNITS)
(24-2 BDR, 12-1 BDR)
FF= 507.50'

BUILDING #2 (36 UNITS)
(24-2 BDR, 12-1 BDR)
FF= 510.00'

BUILDING #3 (30 UNITS)
(24-2 BDR, 6-1 BDR)
67 Parking Stalls
FF= 504.50'
SF= 514.50'

ACOE WETLANDS
AREA = ±1.8 AC
APPROXIMATE LIMIT OF 100
YEAR FLOOD PLAIN W.E. 499.50'

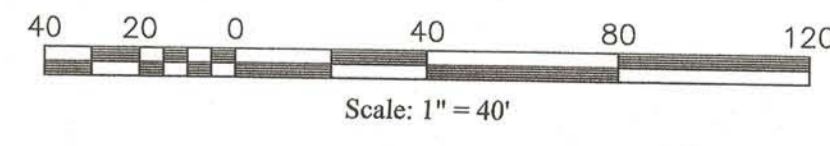
NEW YORK STATE
FRESHWATER WETLAND NO. NB-21
AREA = ±5.8AC
FHA W.E.= 490 FT

EXISTING BUILDING
ICE TIME SPORTS COMPLEX

MAP REVISION DATES		
DATE	REVISION	BY
03-13-2017	ADDED SPOT ELEVATIONS	CC

SITE PLAN
FOR SENIOR HOUSING AT
21 LAKESIDE PROPERTIES INC.

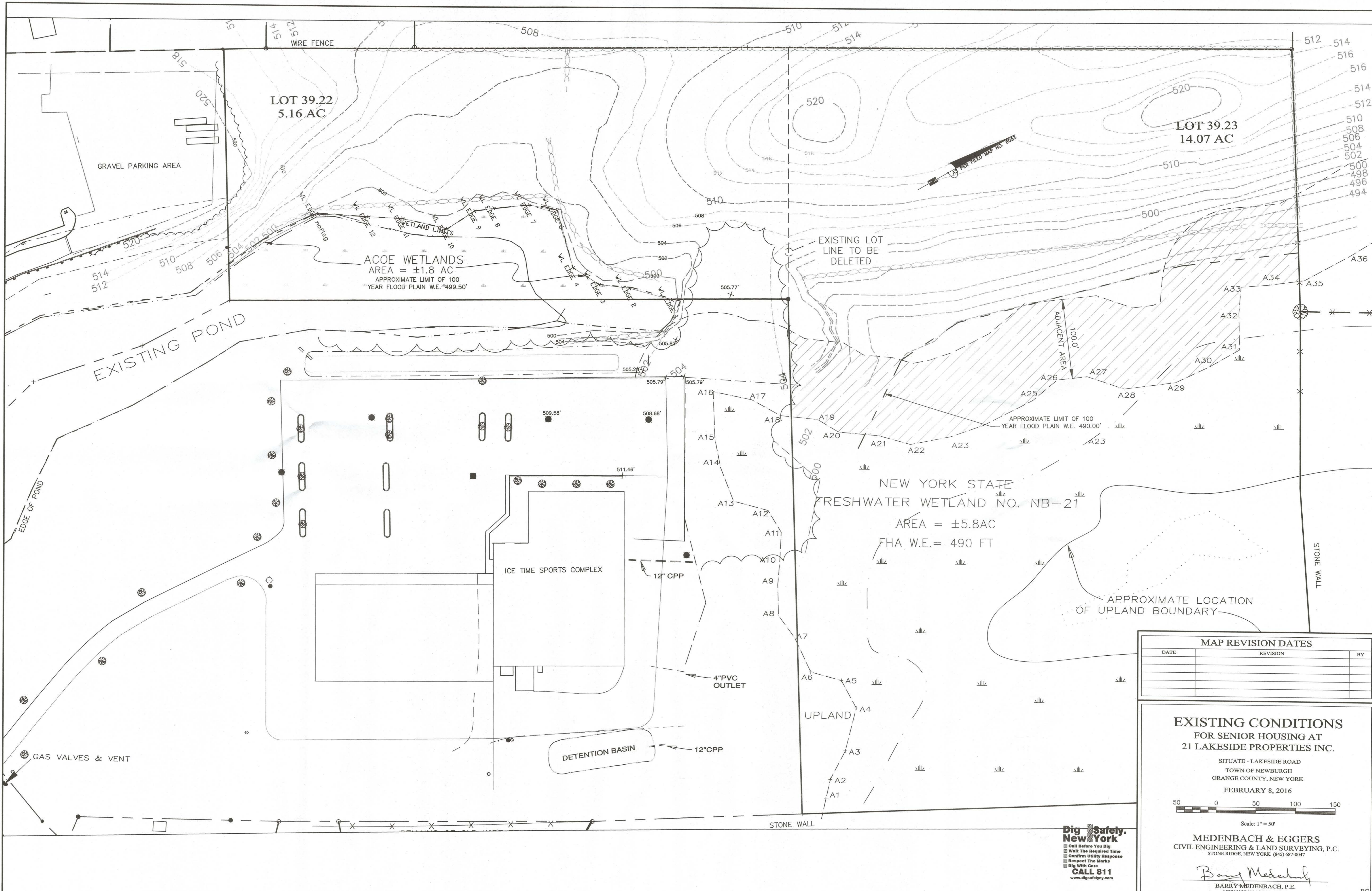
SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016



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Barry Medenbach
BARRY MEDENBACH, P.E.
NEW YORK LIC. NO. 60142

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MAP REVISION DATES		
DATE	REVISION	BY

EXISTING CONDITIONS
 FOR SENIOR HOUSING AT
 21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
 TOWN OF NEWBURGH
 ORANGE COUNTY, NEW YORK
 FEBRUARY 8, 2016

Scale: 1" = 50'

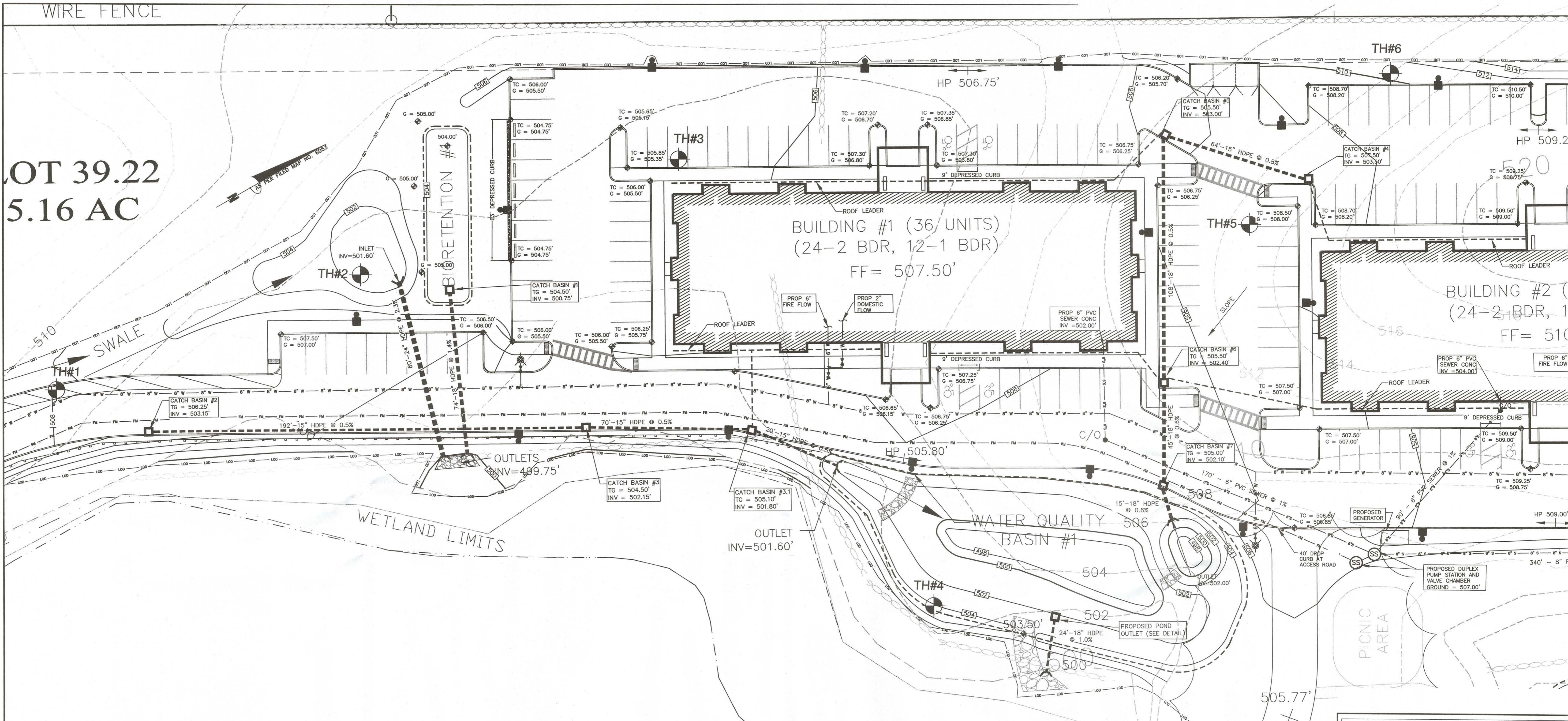
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WIRE FENCE

LOT 39.22
5.16 AC



Test Hole Data
21 Lakeside Senior Housing
15-Sep-16

TH#	Depth	Soil Description
TH#1	0-6"	Topsail
	6"-48"	Gravelly silt loam with broken & weathered shale
	48"	Shale-no water or mottling
TH#2	0-6"	Topsail
	6"-72"	Gravelly silt loam-no water, rock or mottling
TH#3	0-6"	Topsail
	6"-72"	Gravelly silt loam-no water, rock or mottling
TH#4	0-6"	Topsail
	6"-60"	Gravelly silt loam with broken shale
TH#5	0-6"	Topsail
	6"-18"	Gravelly silt loam
	18"-36"	Fractured shale
TH#6	36"	Shale, no water or mottling
	60"	Broken shale, no water

- STORMWATER NOTES:**
- Stormwater Management Facilities shall be regularly maintained to ensure they function at design capacity and to prevent health hazards associated with debris and stagnant water. The privately owned portion of the system must be privately maintained.
 - Responsibility for the operation and maintenance of the stormwater facilities, including periodic removal and disposal of accumulated particulate material and debris, but not limited to the following: visual inspection of all system components at least twice a year; vacuuming of all storm sewer inlets once every six months (frequency may be adjusted to once a year if first year maintenance records indicate that sediment and debris accumulation is insignificant); reverse flushing and vacuuming if the system inspection indicate significant accumulation of sediment in the pipes; and periodic removal and disposal of other material and debris, shall remain with the owner or owners of the property, with permanent arrangements that shall pass to any successive owner, unless assumed by a governmental agency.
 - In the event that the facility becomes a danger to public safety or public health, or it is in need of maintenance, the owner shall effect such maintenance and repair of the facility in a manner that is approved by the Town Engineer or his designee, if the owner fails to perform such maintenance and repair, the Municipality may immediately proceed to do so and shall bill the cost to the owner.

- ABBREVIATIONS**
- TC TOP OF CURB
 - G GROUND OR PAVEMENT
 - FF FINISH FLOOR
 - INV INVERT
 - TG TOP OF GRADE
 - HP HIGH POINT OF PAVEMENT
 - DEPRESSED CURB
 - RAMP

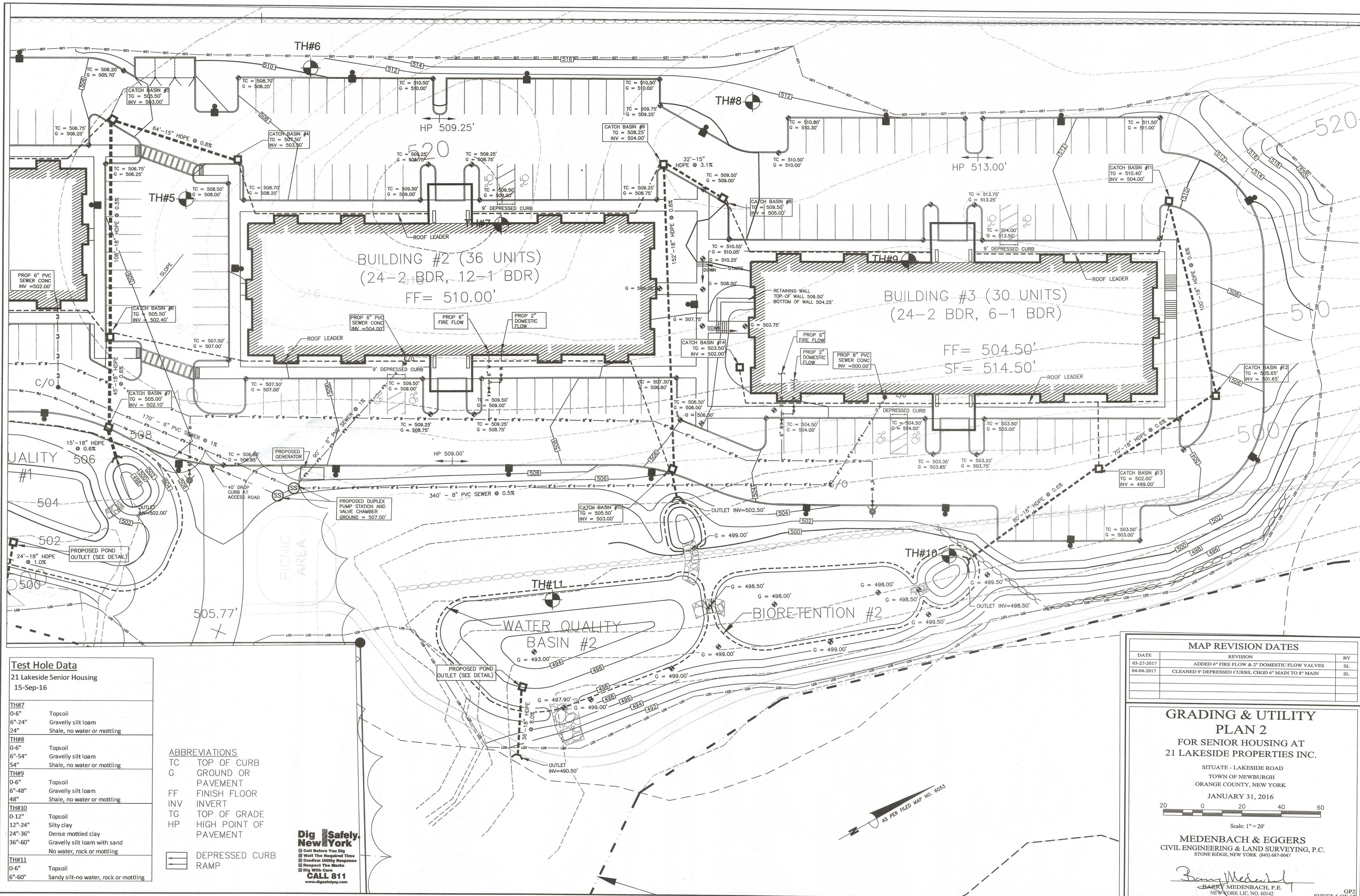
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PROPOSED EMERGENCY GRAVEL ACCESS ROAD

MAP REVISION DATES

DATE	REVISION	BY
03-27-2017	ADDED 6" FIRE FLOW & 2" DOMESTIC FLOW VALVES	SL
04-04-2017	LABELLED DEPRESSED CURBS	SL

GRADING & UTILITY PLAN 1
 FOR SENIOR HOUSING AT
 21 LAKESIDE PROPERTIES INC.
 SITUATE - LAKESIDE ROAD
 TOWN OF NEWBURGH
 ORANGE COUNTY, NEW YORK
 JANUARY 31, 2016
 Scale: 1" = 20'
MEDENBACH & EGGERS
 CIVIL ENGINEERING & LAND SURVEYING, P.C.
 STONE RIDGE, NEW YORK (845) 687-0047
 Barry Medenbach, P.E.
 NEW YORK LIC. NO. 60142
 SHEET 4 OF 17



Test Hole Data
21 Lakeside Senior Housing
15-Sep-16

TH#7	0-6"	Topsoil
	6"-24"	Gravelly silt loam
	24"	Shale, no water or mottling
TH#8	0-6"	Topsoil
	6"-54"	Gravelly silt loam
	54"	Shale, no water or mottling
TH#9	0-6"	Topsoil
	6"-48"	Gravelly silt loam
	48"	Shale, no water or mottling
TH#10	0-12"	Topsoil
	12"-24"	Silty clay
	24"-36"	Dense mottled clay
	36"-60"	Gravelly silt loam with sand No water, rock or mottling
TH#11	0-6"	Topsoil
	6"-60"	Sandy silt-no water, rock or mottling

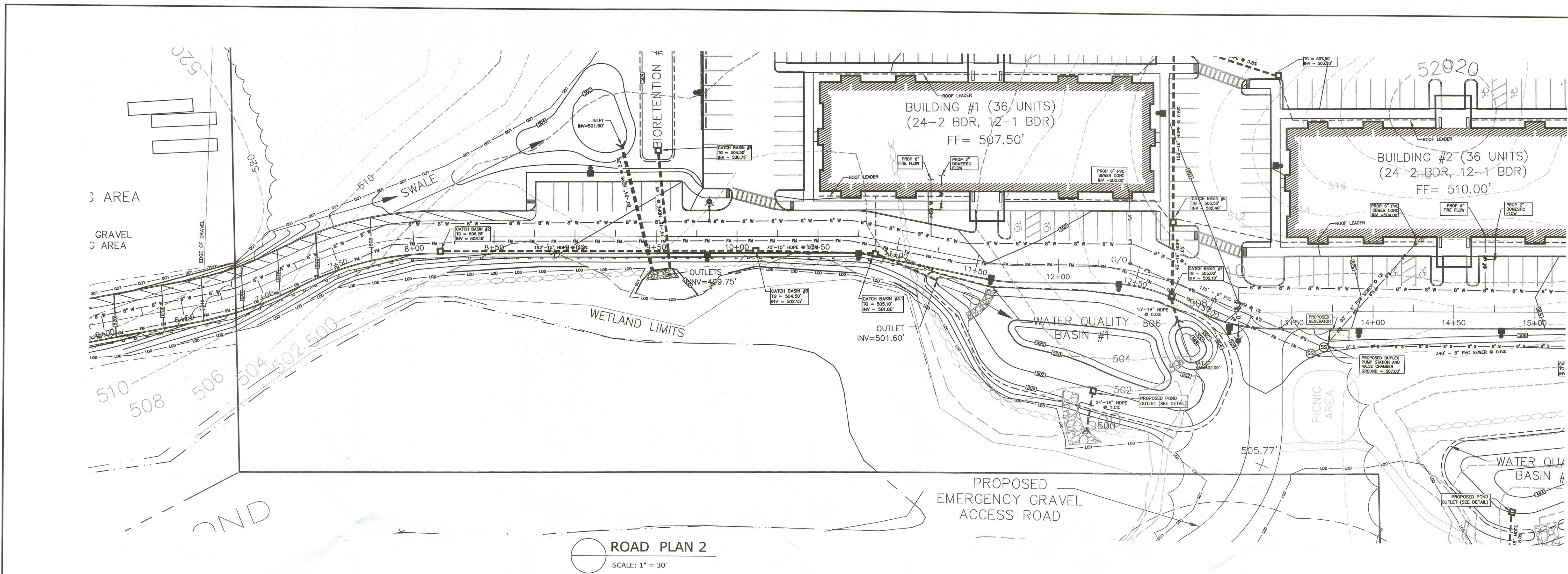
ABBREVIATIONS
 TC TOP OF CURB
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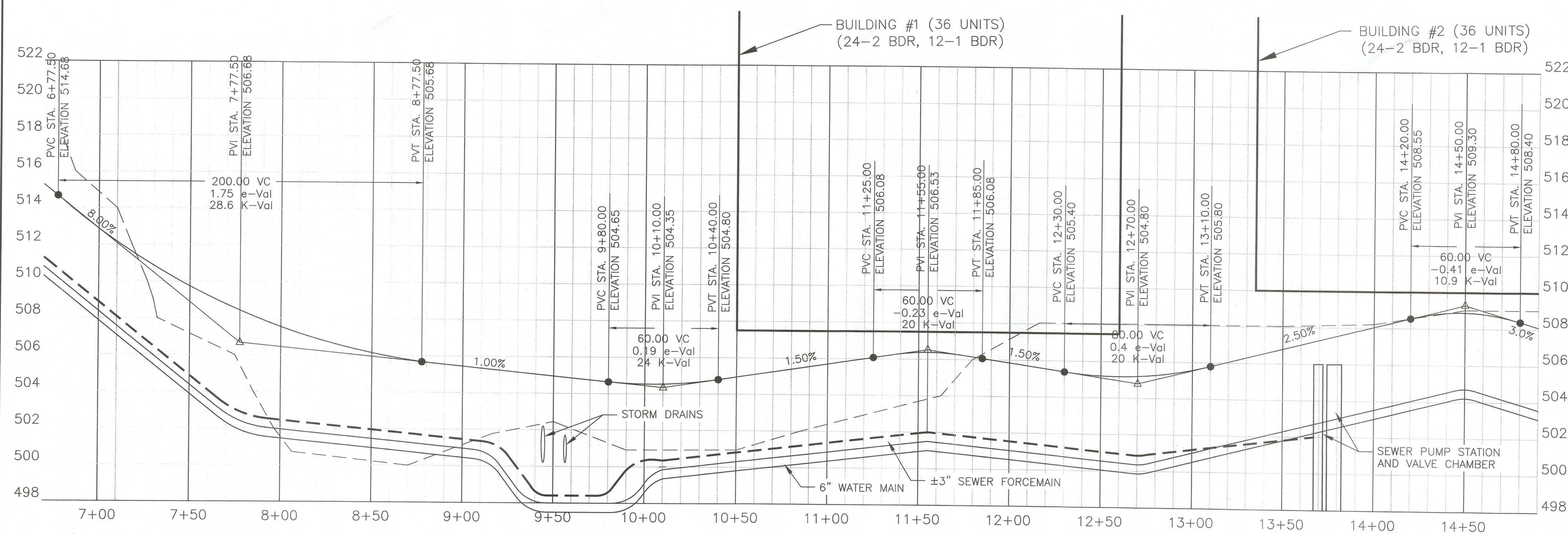
MAP REVISION DATES

DATE	REVISION	BY
03-27-2017	ADDED 6" FIRE FLOW & 2" DOMESTIC FLOW VALVES	SL
04-04-2017	CLEANED 9" DEPRESSED CURBS, CHGD 6" MAIN TO 8" MAIN	SL

GRADING & UTILITY PLAN 2
 FOR SENIOR HOUSING AT
 21 LAKESIDE PROPERTIES INC.
 SITUATE - LAKESIDE ROAD
 TOWN OF NEWBURGH
 ORANGE COUNTY, NEW YORK
 JANUARY 31, 2016
 Scale: 1" = 20'
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Benny Medenbach
 BARRY MEDENBACH, P.E.
 NEW YORK LIC. NO. 60142



ROAD PLAN 2
SCALE: 1" = 30'



ROAD PROFILE 2
SCALE: 1" = 30' HORIZONTAL 1" = 3' VERTICAL

MAP REVISION DATES

DATE	REVISION	BY

ROAD PROFILE AND PLAN 2
FOR SENIOR HOUSING AT 21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016

Scale: 1" = 30'

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SHRUB & PERENNIAL SCHEDULE					
SYMBOL	SPECIES	COMMON NAME	QUANTITY	SIZE UPON PLANTING	HEIGHT
	Hamamelis Virginia	American Witchhazel	4	3 Gal. Cont.	36" TO 48"
	Ilex	China Girl Holly Bush	36	3 Gal. Cont.	24" TO 36"
	Spirea	Limemound Spirea	22	3 Gal. Cont.	12" TO 18"
	Spirea	Little Princess Spirea	60	3 Gal. Cont.	12" TO 18"
	Viburnum dentatum	Arrowwood	11	3 Gal. Cont.	24" TO 36"
	Buxus Microphylla	Winter Gem Boxwood	41	3 Gal. Cont.	12" TO 18"
	Syringa Patula	Miss Kim Lilac	30	5 Gal. Cont.	2' TO 3'
	Rosa 'Knockout'	Knockout Rose	7	3 Gal. Cont.	2' TO 3'
	Cornus stolonifera	Red Osier Dogwood	17	3 Gal. Cont.	±18"
	Aster novae-angliae	New England Aster	9	1 Gal. Cont.	±18"
	Iris versicolor	Blue Flag Iris	42	1 Gal. Cont.	±18"
	Hemerocallis	Stella Doro Daylily	29	1 Gal. Cont.	12" TO 18"
	Lobelia siphatica	Great Blue Lobelia	34	1 Gal. Cont.	±2'
	Rudbeckia lacinata	Cutleaf Coneflower	14	1 Gal. Cont.	±18"
	Mondarda fistulosa	Wild Bergamot	43	1 Gal. Cont.	2' TO 3'
	Scirpus cyprinus	Woolgrass	35	1 Gal. Cont.	±3'
	Spartina Pectinata	Cordgrass	23	3 Gal. Cont.	3' TO 4'
	Panicum virgatum	Switchgrass	9	3 Gal. Cont.	3' TO 4'
	Calamagrostis Canadensis	Blue Joint	8	1 Gal. Cont.	±3'

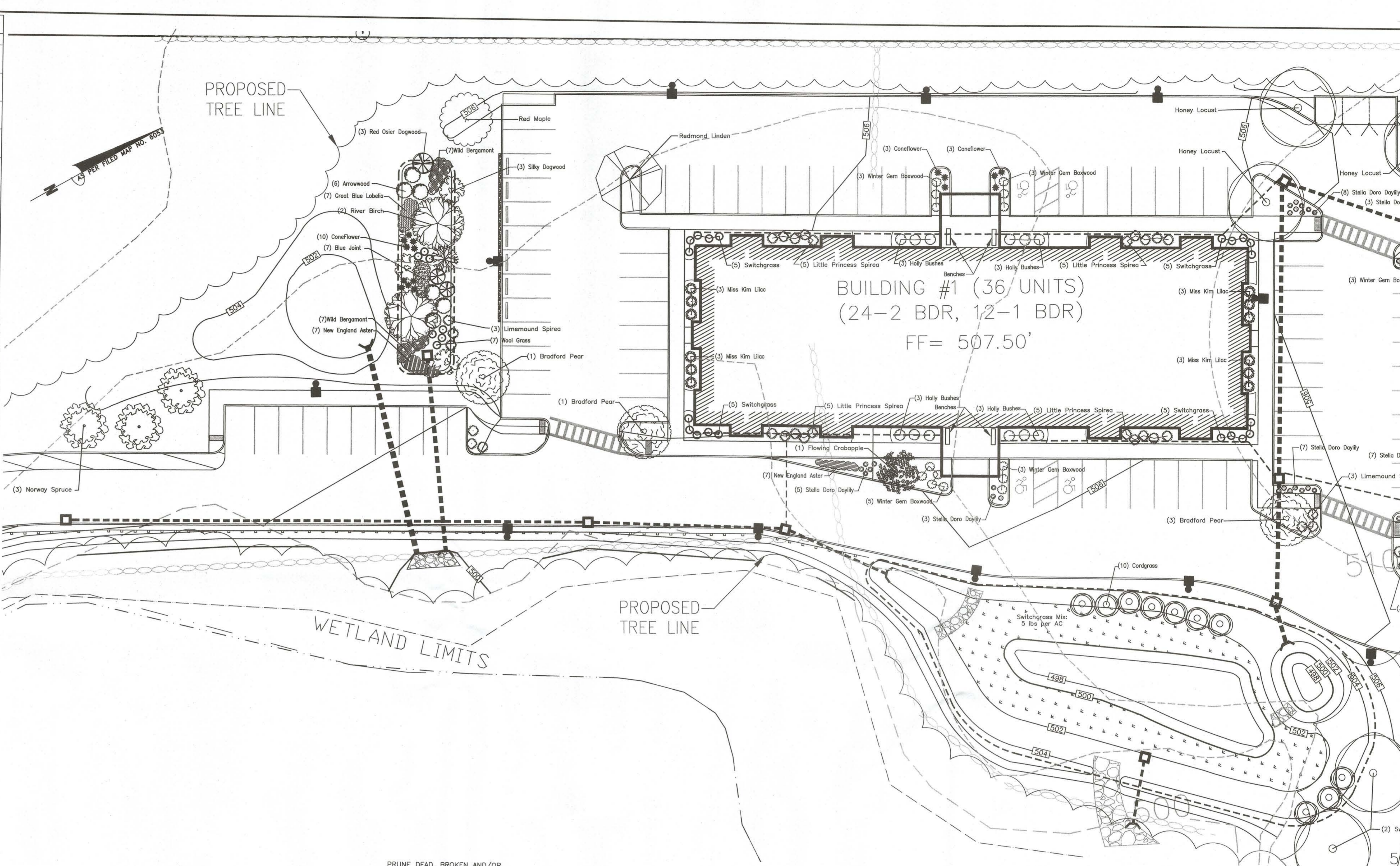
TREE SCHEDULE					
SYMBOL	SPECIES	COMMON NAME	QUANTITY	SIZE UPON PLANTING	HEIGHT
	Acer rebrum	Red Maple	6	2.5"-3" Caliper	±14'
	Betula nigra	River Birch	4	2.5"-3" Caliper	±12'
	Cornus amomum	Silky Dogwood	5	3 Gal. Cont.	±6'
	Quercus bicolor	Swamp White Oak	2	2.5"-3" Caliper	±14'
	Gleditsia triacanthos	Thornless Honey Locust	15	2.5"-3" Caliper	±14'
	Tilia Americana "Redmond"	Redmond Linden	3	2.5"-3" Caliper	±14'
	Pyrus calleryana "Holmford"	New Bradford Pear	9	2.5"-3" Caliper	±12'
	Malus floribunda	Flowering Crabapple	1	2.5"-3" Caliper	±8'
	Picea abies	Norway Spruce	8	2-1/2" - 3" Caliper	±8'

SEEDING MIX FOR SITE LAWNS					
APPLICATION	SPECIES	% PURE LWC SEED	APPLICATION RATE	FERTILIZER	SEEDING DATE
TEMPORARY	ANNUAL RYE	88.2%	10 LBS./1000 S.Y.	5-5-5 AT 207 LBS./1000 S.Y.	3/15 TO 10/15
PERMANENT	PERENNIAL RYE	88.2%	4 LBS./1000 S.Y.	SEE NOTE 1 BELOW	3/15 TO 6/1
	KENTUCKY BLUE GRASS MIX*	78.4%	6 LBS./1000 S.Y.	SEE NOTE 1 BELOW	9/1 TO 10/15
	CREeping RED FESCUE	83.3%	11 LBS./1000 S.Y.	SEE NOTE 1 BELOW	9/1 TO 10/15
PERMANENT	TALL FESCUE (W.K. KENTUCKY 31)	83.5%	7.5 LBS./1000 S.Y.	SEE NOTE 1 BELOW	4/1 TO 6/15
	BIRDSFOOT TREFOIL MIX REDTOP	**78.4%	2.0 LBS./1000 S.Y.	SEE NOTE 1 BELOW	9/1 9/15
		73.6%	1.0 LBS./1000 S.Y.		

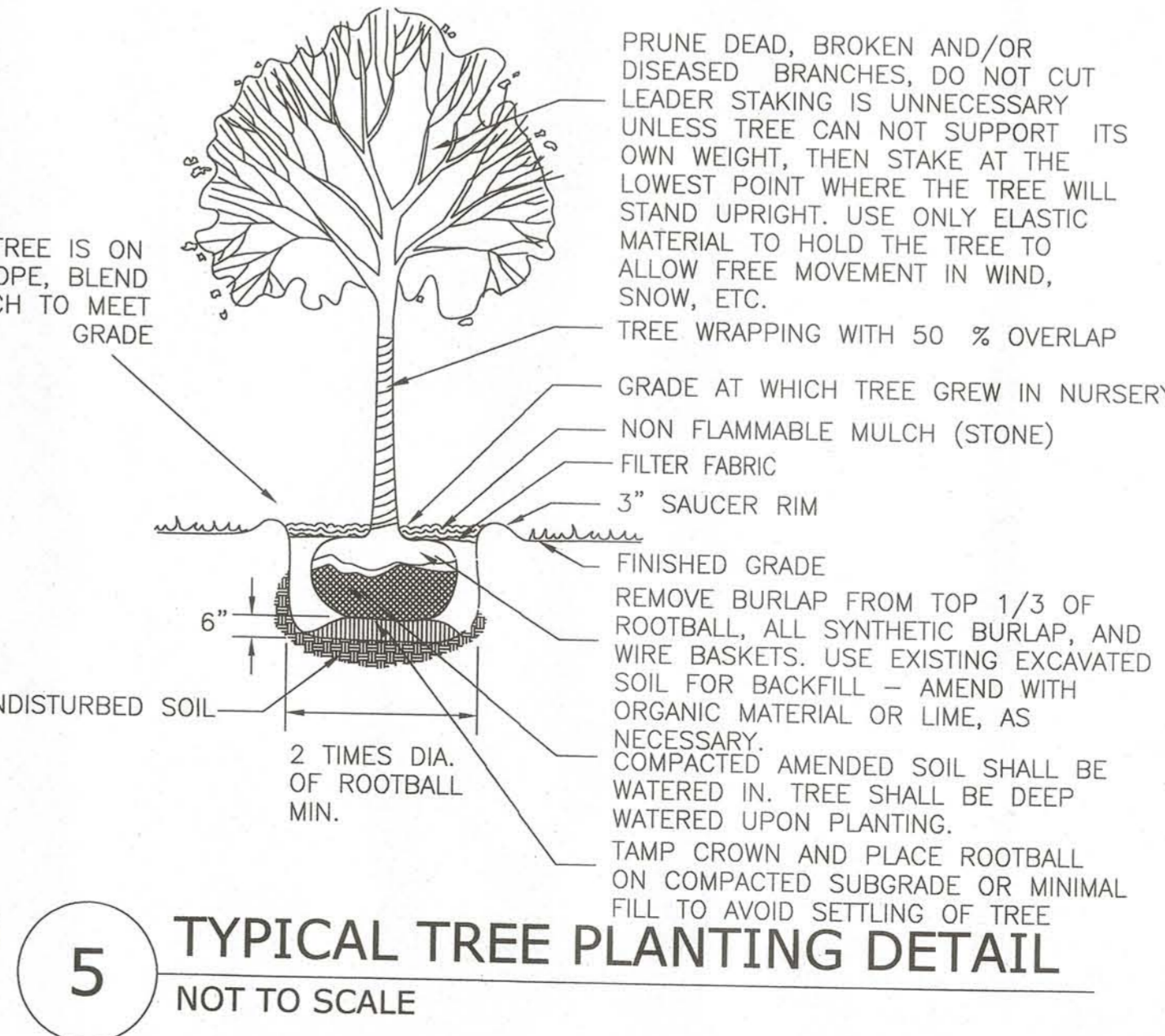
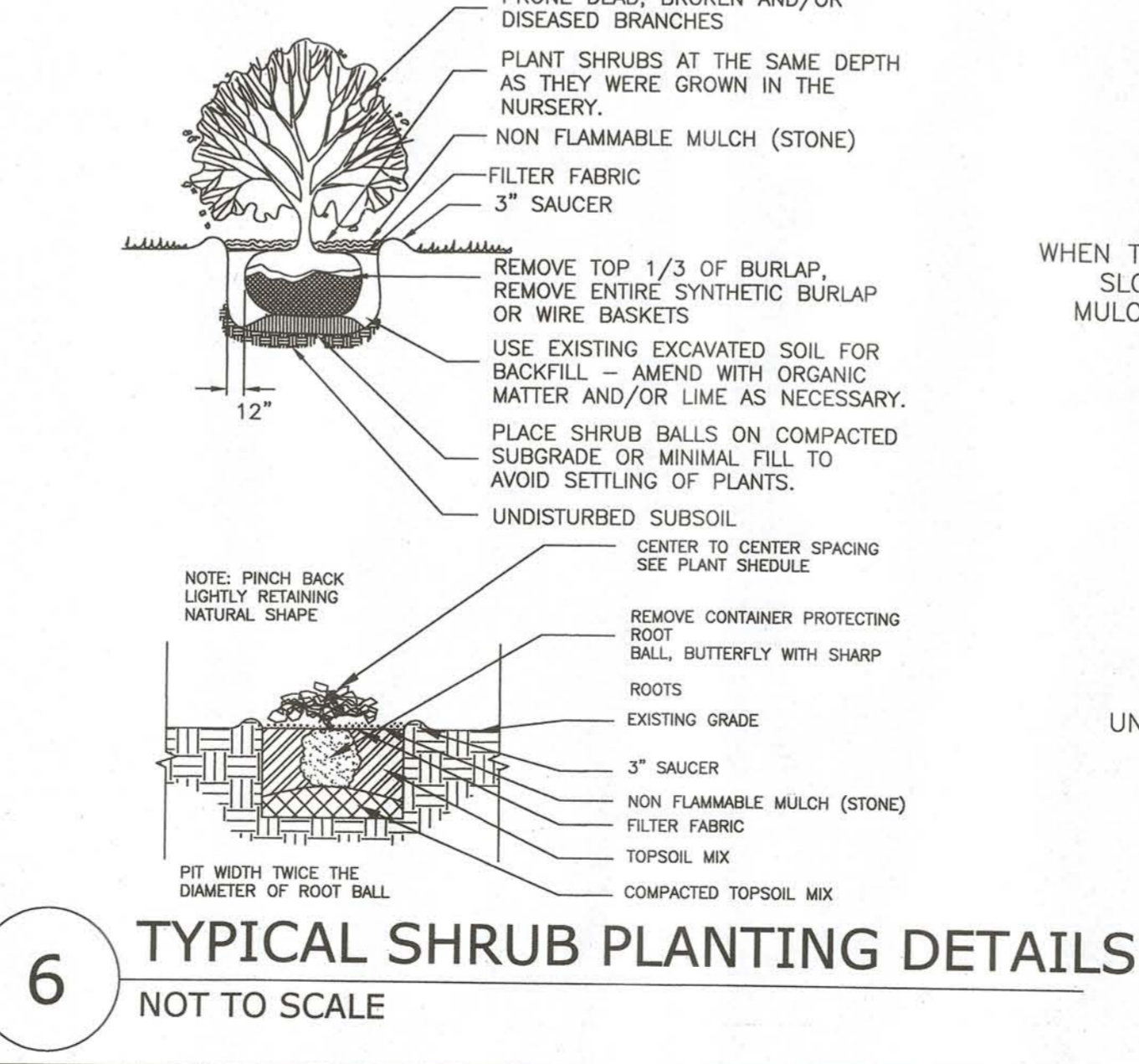
1. FERTILIZER SHALL BE APPLIED IN ACCORDANCE WITH A SOIL TEST. IN THE ABSENCE OF A SOIL TEST, FERTILIZER SHALL BE APPLIED AS FOLLOWS:
A. 10-20-20 ANALYSIS COMMERCIAL FERTILIZER AT 140 LBS./1000 S.Y.
B. 38-0-0 UREA FORM FERTILIZER AT 50 LBS./1000 S.Y.
C. 32-0-0 TO 38-0-0 SULFUR COATED UREA FERTILIZER AT 59-50 LBS./1000 S.Y.
D. 31-0-0 IBDU FERTILIZER AT 61 LBS./1000 S.Y.

2. ALL SEEDING AREAS SHALL BE MULCHED WITH HAY OR STRAW APPLIED AT A RATE OF 6000 LBS./AC.

3. ALL AREAS RECEIVING SEEDING SHALL HAVE A MINIMUM OF 6" OF ORGANIC TOPSOIL (1240 LBS./1000 S.Y.). MULCH TO BE ANCHORED WITH WOOD CELLULOSE FIBER AT 750 LBS./AC. OR EQUAL.
* BLUEGRASS MIX: A COMBINATION OF CERTIFIED VARIETIES EACH AT 25% OR LESS OF MIX.
** MINIMUM 20% HARDESEED AND 80% NORMAL SPROUTS.



- LANDSCAPING NOTES:**
- The contractor shall furnish and plant all plants in quantities as shown on this plan. No substitutes will be permitted unless approved by the owner. All plants shall be nursery grown.
 - Plants shall be in accordance with the current "American Association for Nursery Stock" as published by the American Association of Nurserymen.
 - Plant stock shall be grown within the hardiness zone 5 established by the plant hardiness zone map, miscellaneous publications no. 914, agricultural research service, United States Department of Agriculture, latest revision.
 - All plants must be moved with the root systems as solid units with the balls of earth firmly wrapped with burlap. No plants shall be accepted when the ball of earth surrounding its roots has been badly cracked or broken before planting. All plants shall be freshly dug. All plants that cannot be planted at once must be heeled in by setting in the ground, and covering the balls with soil and then watering during transport. All plant materials shall be wrapped with wind proof covering.
 - Plant material shall bear the same relationship to finished grade as to the original planting grade prior to digging.
 - All disturbed areas not to be paved or otherwise treated shall receive four (4) inch loam and seed.
 - See planting details and specifications for additional requirements.
 - Tree stakes and wrap shall remain in place for no less than 6 months and no more than 1 year.
 - Planting shall be completed from April 1st through November 1st.
 - Maintenance shall consist of keeping the plants in a healthy growing condition and shall include weeding, cultivating, removing, tightening and repositioning of guys, removal of dead material, resetting plants to proper grades or upright position and maintaining the planting saucer.
 - All vegetation shown on this plan shall be maintained in a healthy and vigorous growing condition throughout the duration of the proposed use. All vegetation not so maintained shall be replaced with new same size and type vegetation at the beginning of the next planting year.
 - Replacements shall conform in all respects to the specifications for new plants and shall be planted in the same manner.



MAP REVISION DATES		
DATE	REVISION	BY
4-6-2017	REVISED PLANT COUNT AND ADDED PLANTING HEIGHTS	CC

LANDSCAPING PLAN 1
FOR SENIOR HOUSING AT
21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK

FEBRUARY 8, 2016

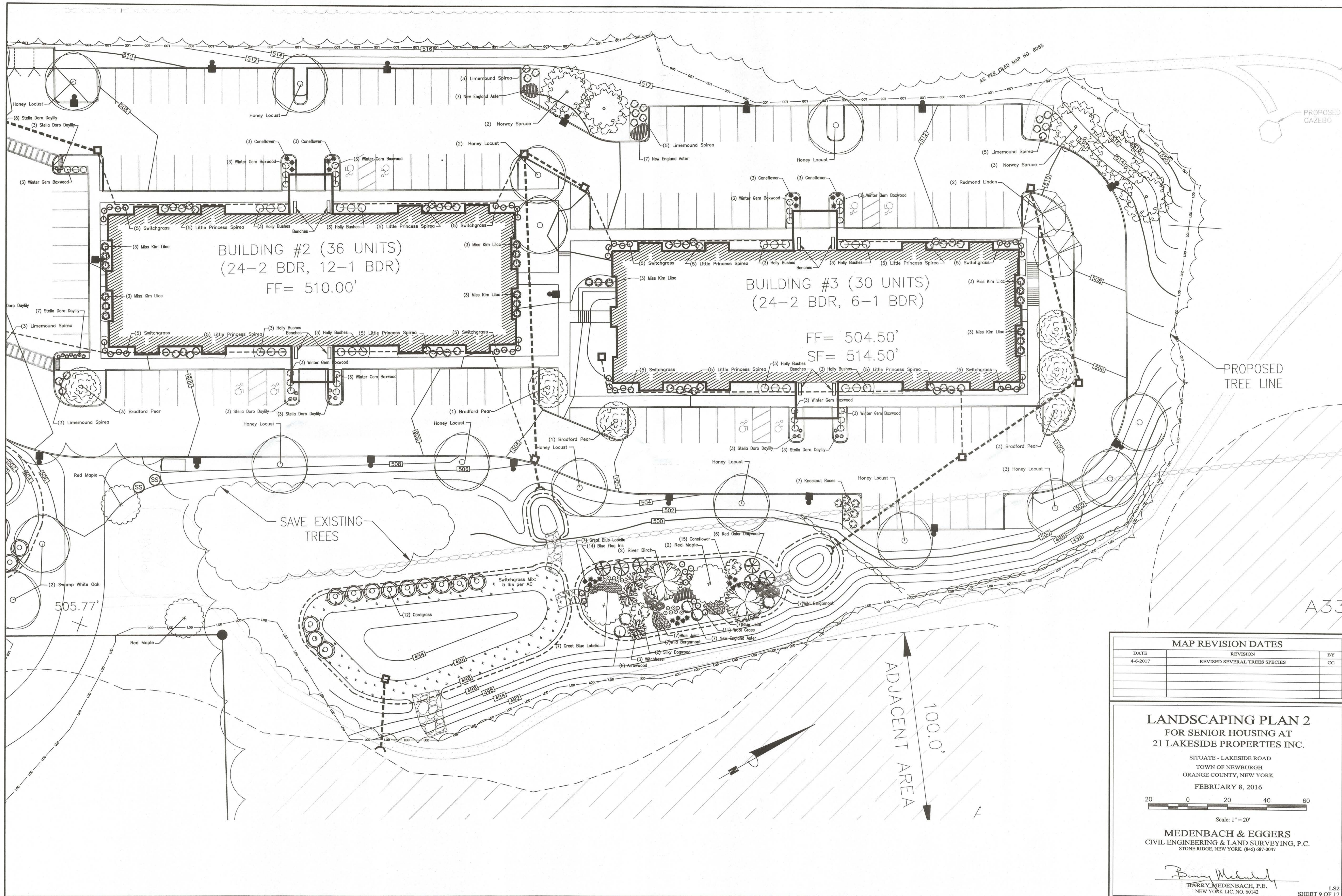
Scale: 1" = 20'

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SHEET 8 OF 17

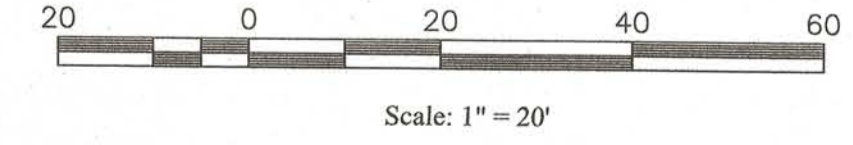
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MAP REVISION DATES		
DATE	REVISION	BY
4-6-2017	REVISED SEVERAL TREES SPECIES	CC

LANDSCAPING PLAN 2
 FOR SENIOR HOUSING AT
 21 LAKESIDE PROPERTIES INC.

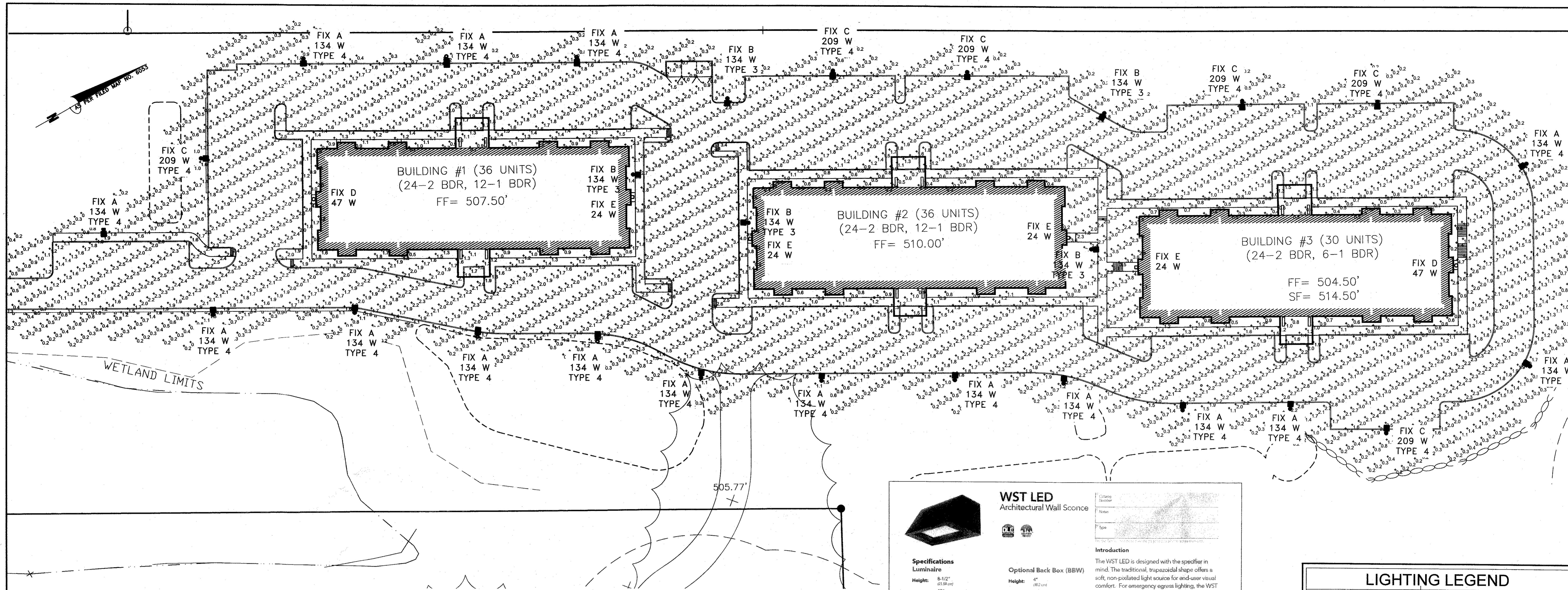
SITUATE - LAKESIDE ROAD
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Scale: 1" = 20'

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CSX1 LED LED Area Luminaire

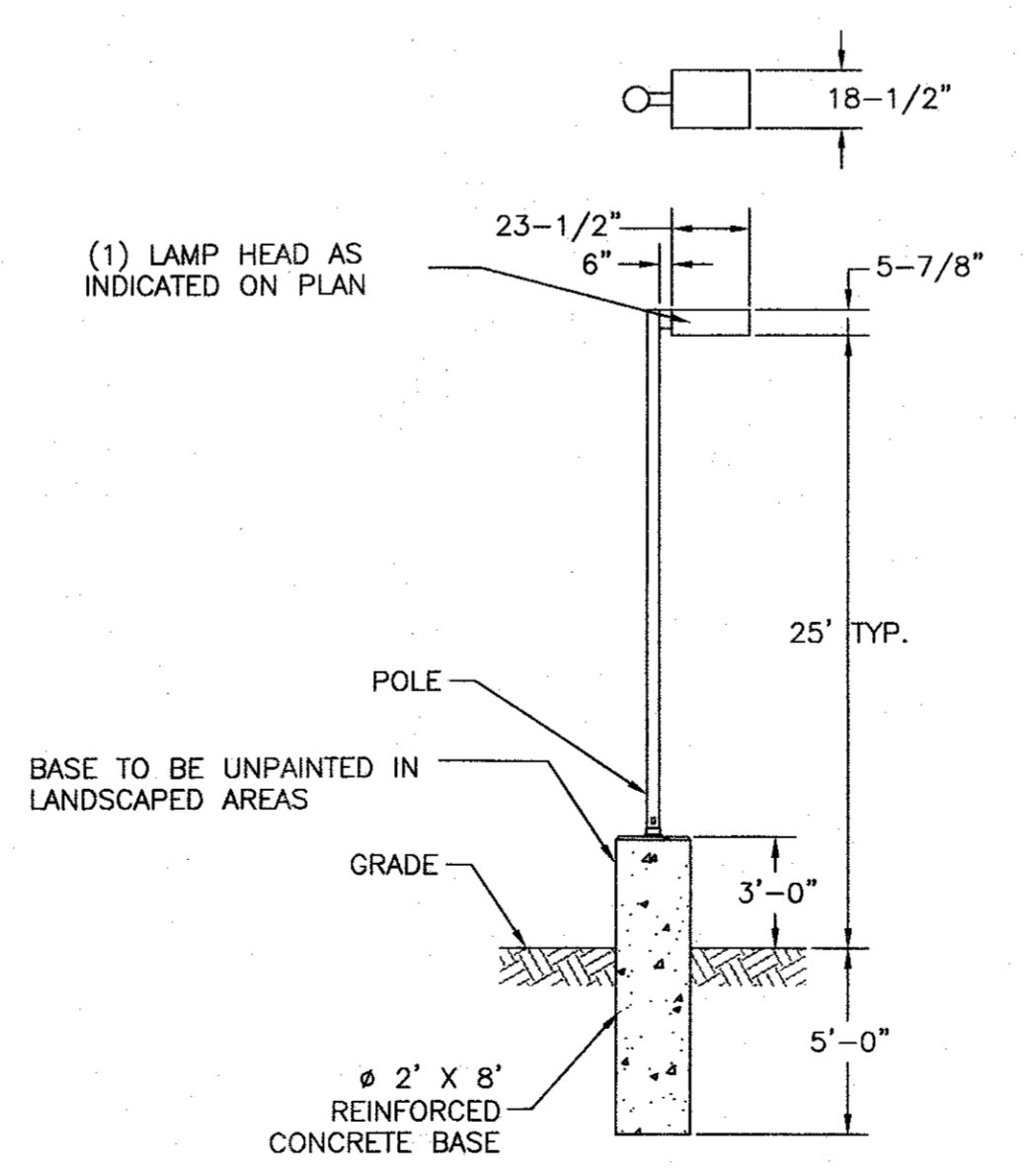
Specifications
 EPA: 0.7 ft
 Length: 23-1/2"
 Width: 18-1/2"
 Height: 5-7/8"
 Weight: 37 lbs (max)

Introduction
 The Contour® Series luminaires offer traditional square daylights with softened edges for a versatile look that complements many applications. The CSX1 combines the latest in LED technology with the familiar aesthetic of the Contour® Series for stylish, high-performance illumination that lasts. It is ideal for replacing traditional metal halide in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information
 EXAMPLE: CSX1 LED 60C 1000 40K T3M MVOLT SPA DDBXD

1 POLE MOUNTED LIGHT DETAIL (FIXTURE A, B, AND C)

LITHONIA CSX1 SERIES LED LAMPS:
 MODELS:
 134 WATT LED LAMP LITHONIA MODEL#; CSX1 LED 60C 700 50K T3M HS (HOUSE SHIELD) OR EQUAL
 134 WATT LED LAMP LITHONIA MODEL#; CSX1 LED 60C 700 50K T4M HS (HOUSE SHIELD) OR EQUAL
 209 WATT LED LAMP LITHONIA MODEL#; CSX1 LED 60C 1000 50K T4M HS (HOUSE SHIELD) OR EQUAL



WST LED Architectural Wall Sconce

Specifications Luminaire
 Height: 8-1/2" (82 mm)
 Width: 17" (431 mm)
 Depth: 10-3/16" (259 mm)
 Weight: 20 lbs (9.1 kg)

Optional Back Box (BBW)
 Height: 4" (102 mm)
 Width: 5-1/2" (140 mm)
 Depth: 1-1/2" (38 mm)

Introduction
 The WST LED is designed with the specifier in mind. The traditional, trapezoidal shape offers a soft, non-polluted light source for end-user visual comfort. For emergency egress lighting, the WST LED offers six battery options, including remote. For additional code compliance and energy savings, there is also a Bi-level motion sensor option. With so many standard and optional features, three lumen packages, and high LPW, the WST LED is your "go to" luminaire for most any application.

Ordering Information
 EXAMPLE: WST LED P1 40K VF MVOLT DDBTXD

2 WALL MOUNTED LIGHT DETAIL (FIXTURE D)

LITHONIA TWH WALL MOUNTED LIGHT WITH FULL SHIELD (FS) OPTION:
 MODEL: 47 WATT LED LITHONIA MODEL#; WST LED 1 10A700/50K SR4 MVOLT OR EQUAL

WSR LED Architectural Wall Sconce

Specifications Luminaire
 Height: 7-1/4" (184 mm)
 Width: 18" (457 mm)
 Depth: 9" (229 mm)
 Weight: 12 lbs (5.4 kg)

Optional Back Box (BBW)
 Height: 4" (102 mm)
 Width: 5-1/2" (140 mm)
 Depth: 1-1/2" (38 mm)

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 back-box or remote gear, so installations maintain their aesthetic integrity. The WSR LED is ideal for replacing existing 50-175W metal halide wall-mounted products. The expected service life is 20+ years of nighttime use.

Ordering Information
 EXAMPLE: WSR LED 2 10A700/40K SR3 MVOLT DDBTXD

3 WALL MOUNTED LIGHT DETAIL (FIXTURE E)

LITHONIA TWH WALL MOUNTED LIGHT WITH FULL SHIELD (FS) OPTION:
 MODEL: 24 WATT LED LITHONIA MODEL#; WSR LED 1 10A700/50K SR3 MVOLT OR EQUAL

LIGHTING LEGEND				
FIXTURE	Wattage (TYPE)	DENOTED BY	HEIGHT PLACEMENT	QTY.
A	134W (LED)	●	25'	16
B	134W (LED)	●	25'	5
C	209 W (LED)	●	25'	6
D	47W (LED)	●	12'	2
E	24W (LED)	■	10'	24

MAP REVISION DATES		
DATE	REVISION	BY

LIGHTING PLAN FOR SENIOR HOUSING AT 21 LAKESIDE PROPERTIES INC.

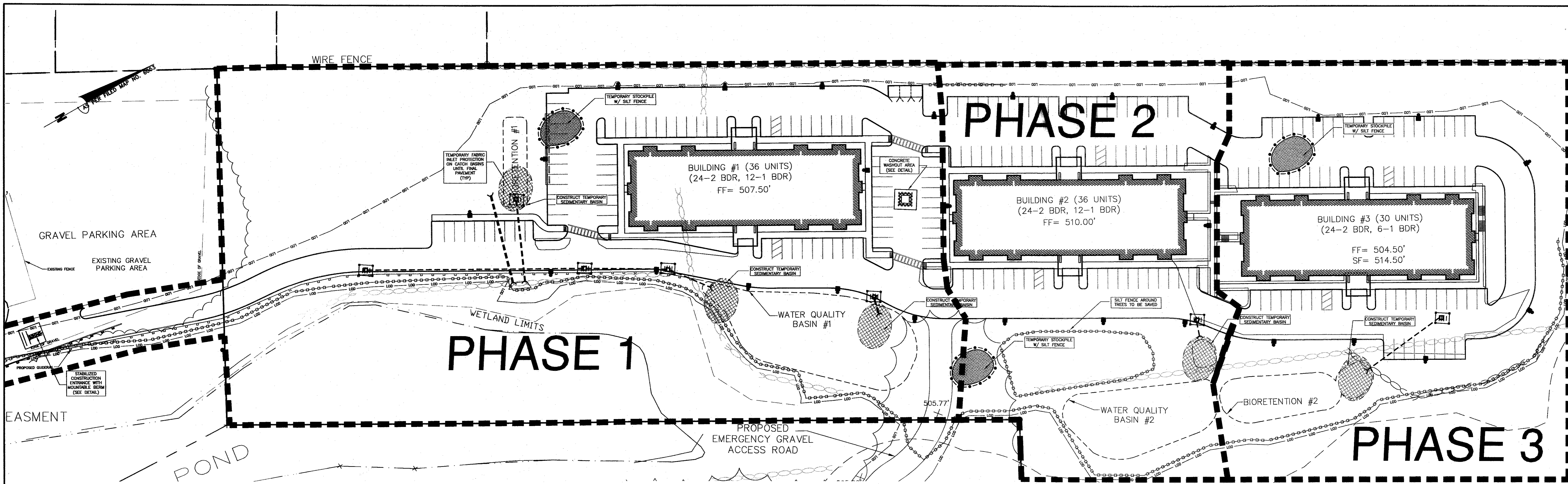
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 FEBRUARY 8, 2016

Scale: 1" = 30'

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L.P. SHEET 10 OF 17



SOIL EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1" = 40'

TOTAL AREA OF DISTURBANCE: 6.26 ACRES

Sequence of Construction Activity:

The following sequence of soil erosion and sediment control measures shall be followed during the duration of the project. In addition the guidelines in the SWPPP shall be implemented where applicable.

- Schedule a pre-construction meeting:** a pre-construction meeting shall be held to review plans and inspect site with town officials including Town Engineer, Contractors, and Project Managers at least one week prior to the start of construction, equipment staging and site disturbance.
- Establish Limits of Clearing and Sensitive Areas to be Protected:** Prior to any construction and/or demolition activities commence a pre-construction meeting shall be held to review plans and inspect site.
- Construct Stabilized Access to Site:** Install the stabilized construction entrance as indicated to provide access for construction traffic to the site.
- Establish Perimeter Controls and Sediment Barriers:** Silt fences will be installed along the perimeter of the site disturbance as shown and around any stockpiles. Silt fences will be installed as per the detail on this sheet. Locations of installation are indicated on this sheet. Temporary diversion swales may also be installed to divert runoff from undisturbed areas around the proposed areas of disturbance.
- Land Clearing, Demolition and Rough Grading:** Begin demolition and clearing activities. The ground surface shall be cleared of all trees, stumps, brush, weeds, roots, matted leaves, pavement and concrete structures, debris, and any other unsuitable material, except as otherwise directed by the engineer. Material accumulated by clearing as described above shall be disposed of by the contractor in a manner satisfactory to the engineer. After clearing and demolition all topsoil shall be stripped and stockpiled for use in final grading as indicated on plans. The temporary sedimentary basin and swale at the rear of the site shall be roughed in to divert runoff during construction activities. Once topsoil has been stripped rough grade site and install permanent drainage structures and conveyance system. As drainage structures are installed and site is brought to final grade install inlet sediment traps. Bio-retention zone and dry swales shall not be constructed until all contributing drainage areas are stabilized (i.e. parking and driveways paved and permanent vegetation established) Establish temporary vegetation on any areas which will not be disturbed for a period 14 days or more. Parking and driveway areas may be stabilized with road base material.
- Building Construction:** During the building construction maintain erosion controls as necessary.
- Landscaping and Final Stabilization:** Place topsoil and install landscaping as indicated on planting plans. Construct stormwater wetland and bio-retention zone in conjunction with final stabilization.
- Final Inspection and Removal of Temporary BMPs:** Perform final inspection of site to ensure all disturbed areas are stabilized. If all disturbed areas are stabilized temporary erosion control measures shall be removed.

Site Inspection Frequency:

The owner or operator shall have a qualified inspector conduct site inspections in conformance with the following requirements:

- When soil disturbances are on going inspections shall be conducted by a qualified professional at least every seven (7) calendar days.
- When soil disturbance activities have been temporarily suspended (winter shutdown etc.) and temporary stabilization measures have been applied to all disturbed areas, the qualified inspector shall conduct a site inspection at least once every thirty (30) calendar days. The owner or operator must notify the NYS DEC Regional Office in writing prior to reducing the inspection frequency.
- For sites where the soil disturbance activities have been shut down with partial project completion, the qualified inspector can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completion of the project portion are in place and constructed in accordance with the SWPPP. The owner or operator shall notify the NYS DEC Regional Office in writing prior to the shutdown. If soil disturbance is not resumed within 2 years from the shutdown date the owner operator shall have the qualified inspector perform a final inspection to certify all disturbed areas have achieved final stabilization, and all temporary structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the Notice of Termination. The completed Notice of Termination shall be submitted to NYS DEC.

NOTE: SEE SITE DETAILS, SHEET #10 FOR CONCRETE WASHOUT DETAIL.

LEGEND

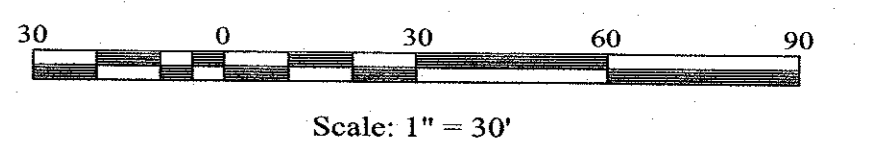
- TOPSOIL STOCKPILE W/SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY CHECK DAM
- SILT FENCE
- LIMIT OF DISTURBANCE
- INLET SEDIMENT TRAP
- AREA TO BE USED FOR SEDIMENTARY EROSION CONTROL UNTIL CONTRIBUTING AREAS ARE STABILIZED

MAP REVISION DATES

DATE	REVISION	BY

PHASING AND SOIL EROSION AND SEDIMENT CONTROL FOR SENIOR HOUSING AT 21 LAKESIDE PROPERTIES INC.

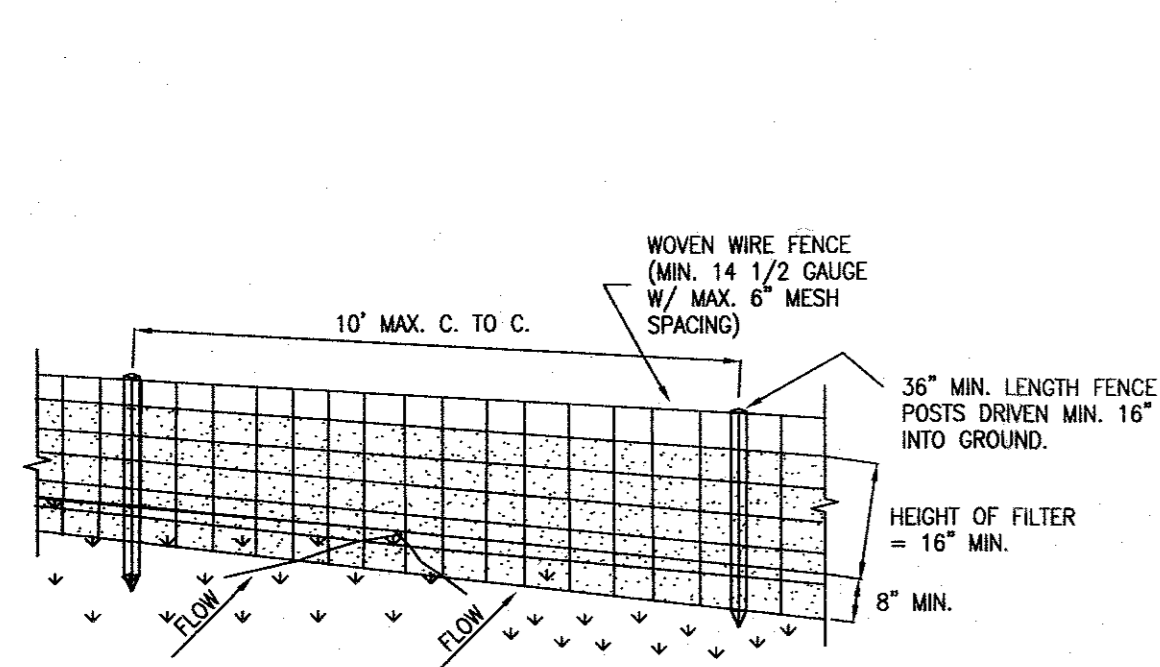
SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016



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STONE RIDGE, NEW YORK (845) 687-0047

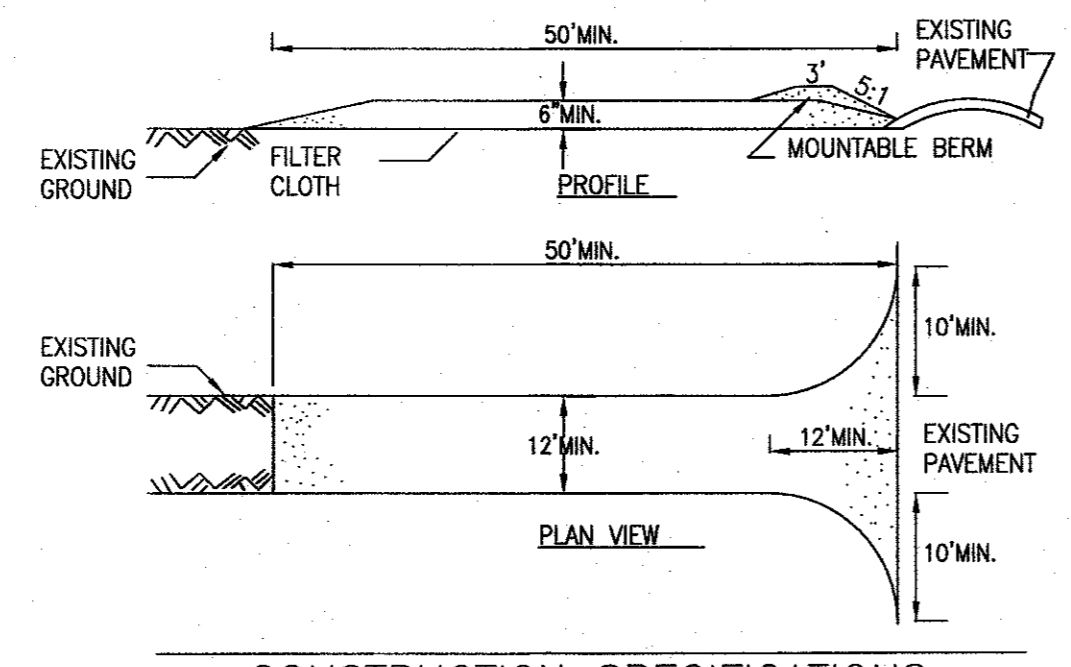
Barry Medenbach
BARRY MEDENBACH, P.E.
NEW YORK LIC. NO. 60142

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Wait The Required Time
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Respect The Marks
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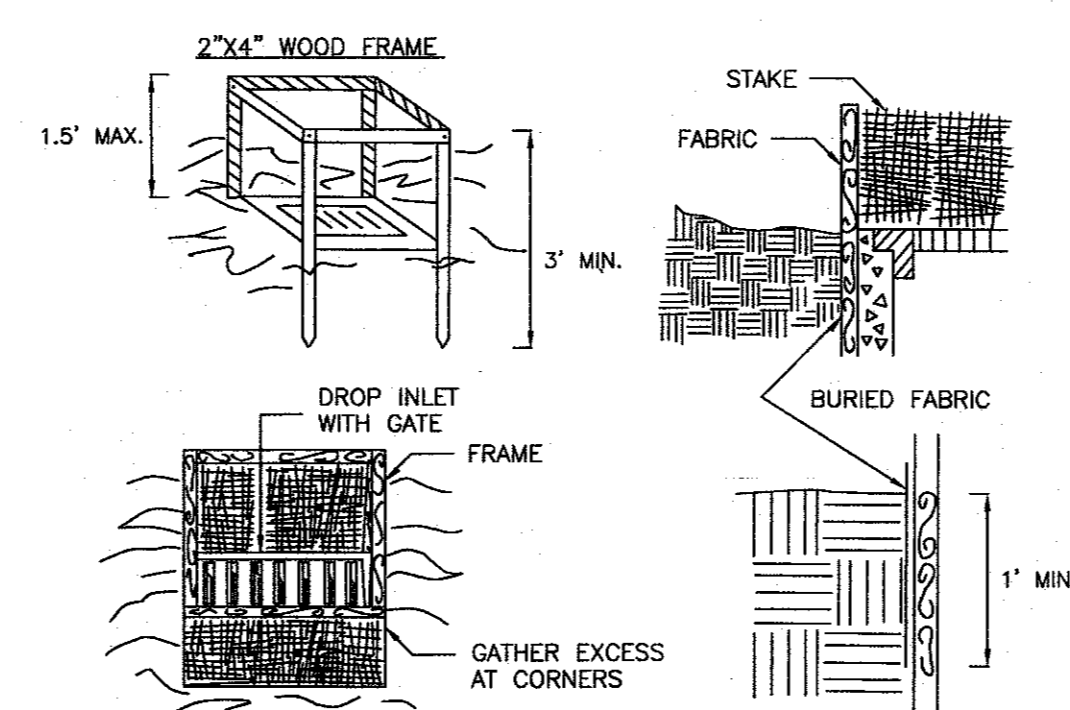
- CONSTRUCTION SPECIFICATIONS**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 1" OR 1 1/2" TYPE OR HARDWOOD.
 - FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FILTER CLOTH SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRA1 100X, STABILINKA 1140X, OR APPROVED EQUIVALENT.
 - PREFABRICATED UNITS SHALL BE GEOTAF, ENVIROFENCE, OR APPROVED EQUIVALENT.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

1 SILT FENCE TYPICAL DETAIL
NOT TO SCALE



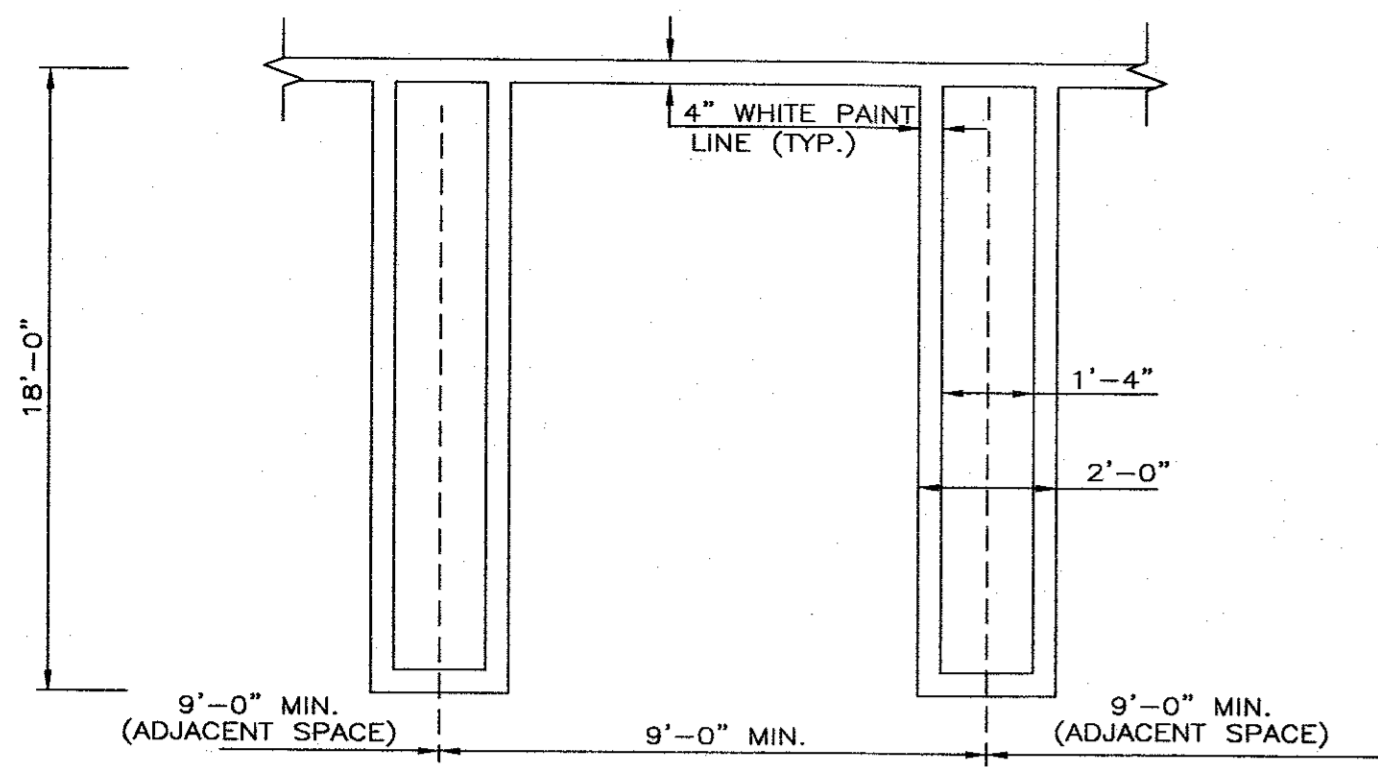
- CONSTRUCTION SPECIFICATIONS**
- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
 - THICKNESS - NOT LESS THAN SIX (6) INCHES.
 - WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
 - FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

2 STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



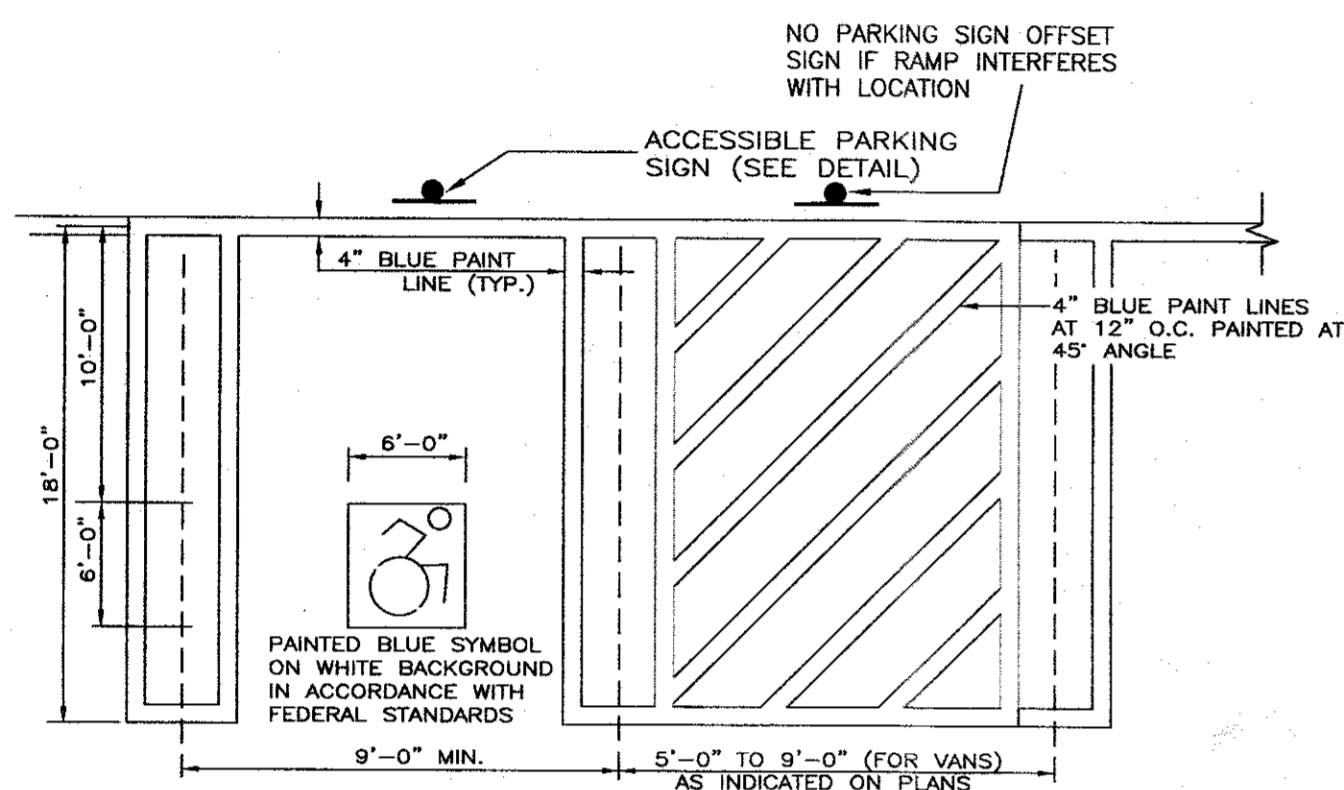
- CONSTRUCTION SPECIFICATIONS**
- FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
 - CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
 - STAKE MATERIALS WILL BE STANDARD, 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
 - SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
 - FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
 - A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY. MAXIMUM DRAINAGE AREA 1 ACRE

3 INLET SILT FENCE SEDIMENT TRAP DETAIL
NOT TO SCALE



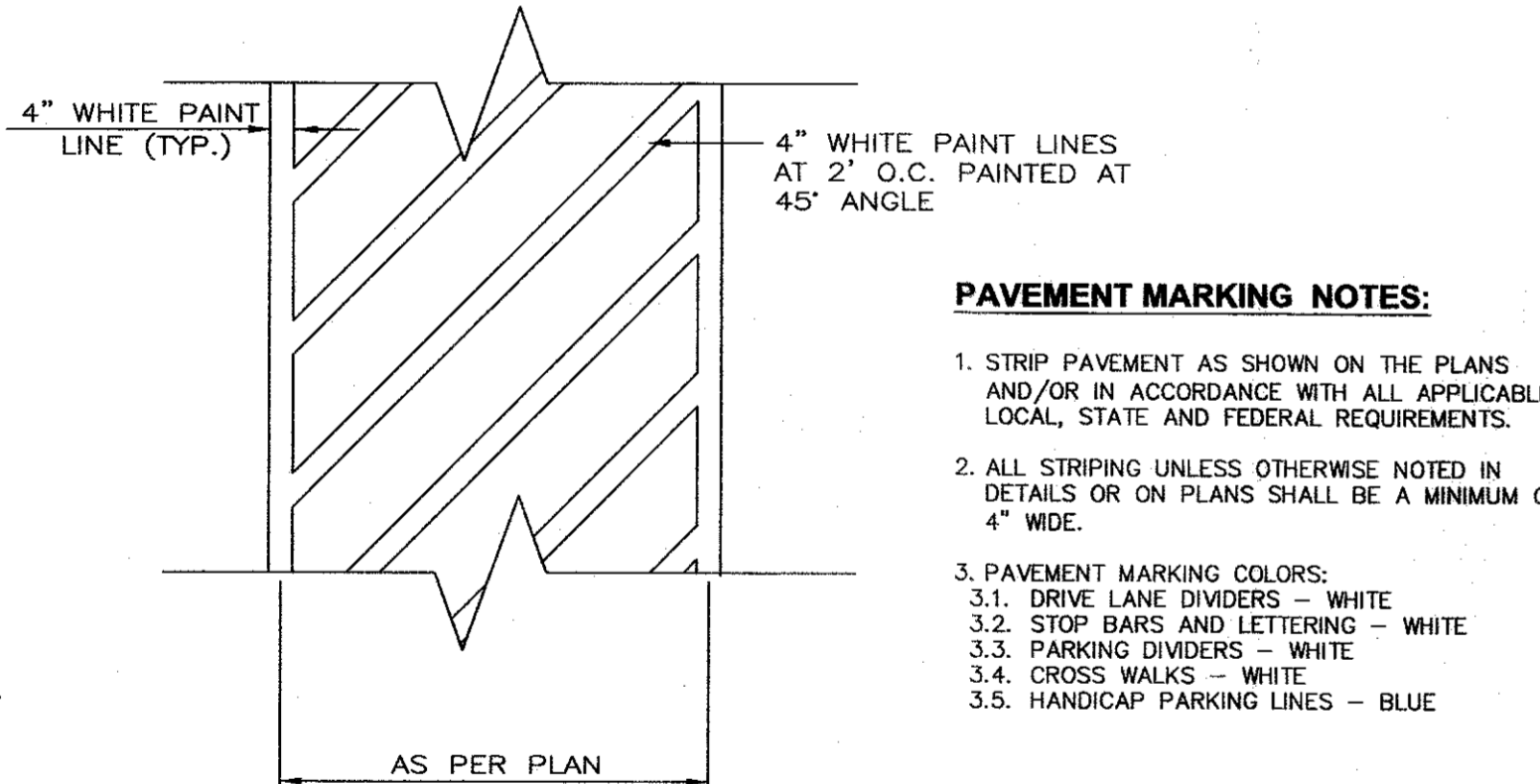
- NOTES:**
1. SEE SITE PLAN FOR SPACE LOCATION.
 2. APPLY TWO COATS OF PAINT ON ALL SURFACES.

1 TYPICAL PARKING SPACE DETAIL
NOT TO SCALE



- NOTES:**
1. SEE SITE PLAN FOR ACCESSIBLE SPACE LOCATION AND DIMENSIONS.
 2. APPLY TWO COATS OF PAINT ON ALL SURFACES.

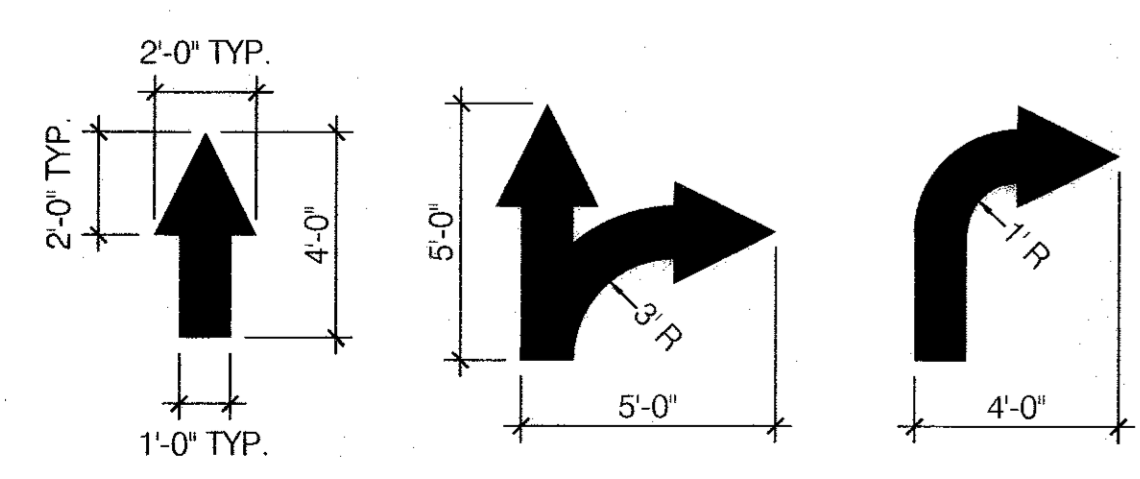
2 HANDICAP PARKING SPACE DETAIL
NOT TO SCALE



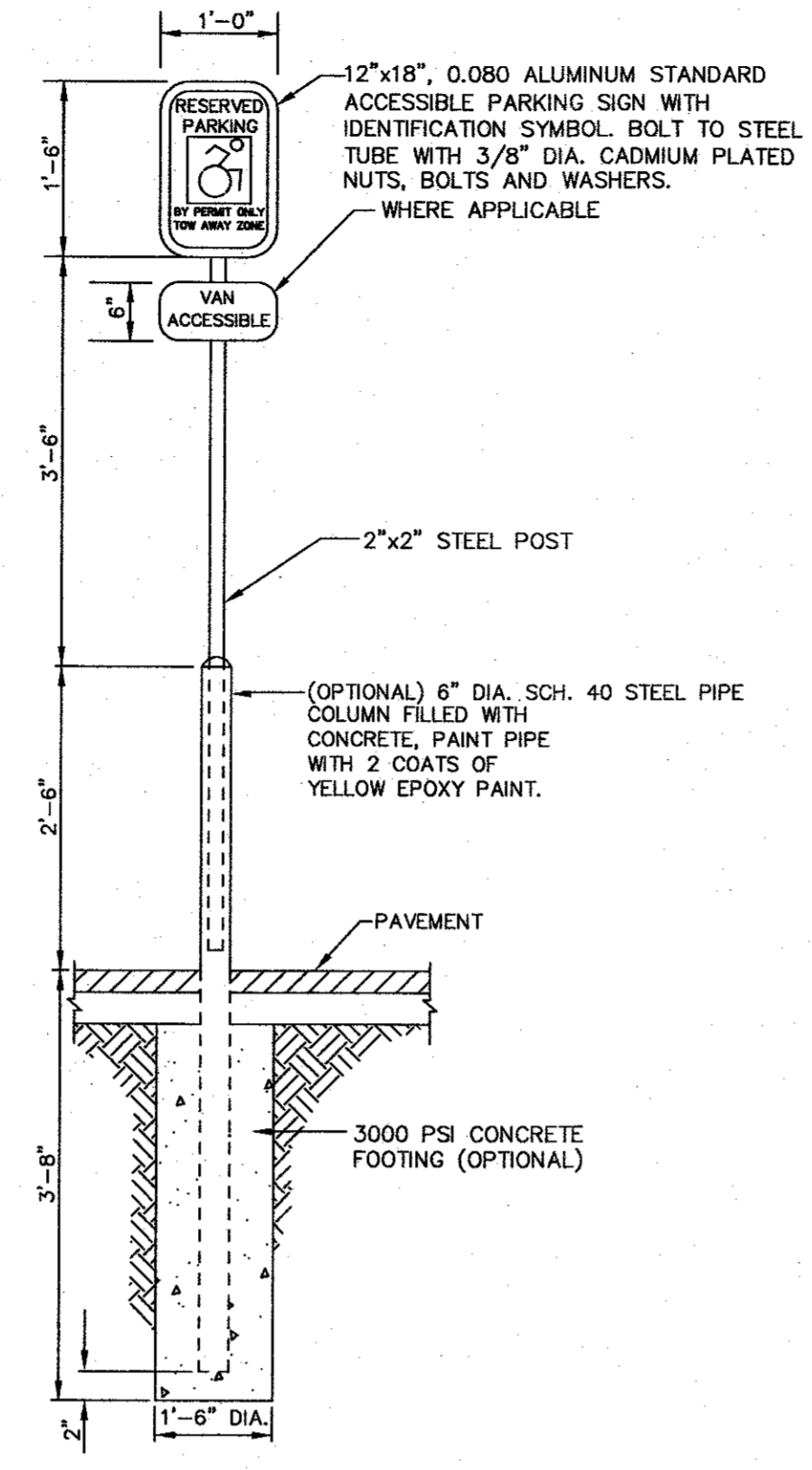
- PAVEMENT MARKING NOTES:**
1. STRIP PAVEMENT AS SHOWN ON THE PLANS AND/OR IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
 2. ALL STRIPING UNLESS OTHERWISE NOTED IN DETAILS OR ON PLANS SHALL BE A MINIMUM OF 4" WIDE.
 3. PAVEMENT MARKING COLORS:
 - 3.1. DRIVE LANE DIVIDERS - WHITE
 - 3.2. STOP BARS AND LETTERING - WHITE
 - 3.3. PARKING DIVIDERS - WHITE
 - 3.4. CROSS WALKS - WHITE
 - 3.5. HANDICAP PARKING LINES - BLUE

- NOTES:**
1. SEE SITE PLAN FOR LOCATION AND DIMENSIONS.
 2. APPLY TWO COATS OF PAINT ON ALL SURFACES.

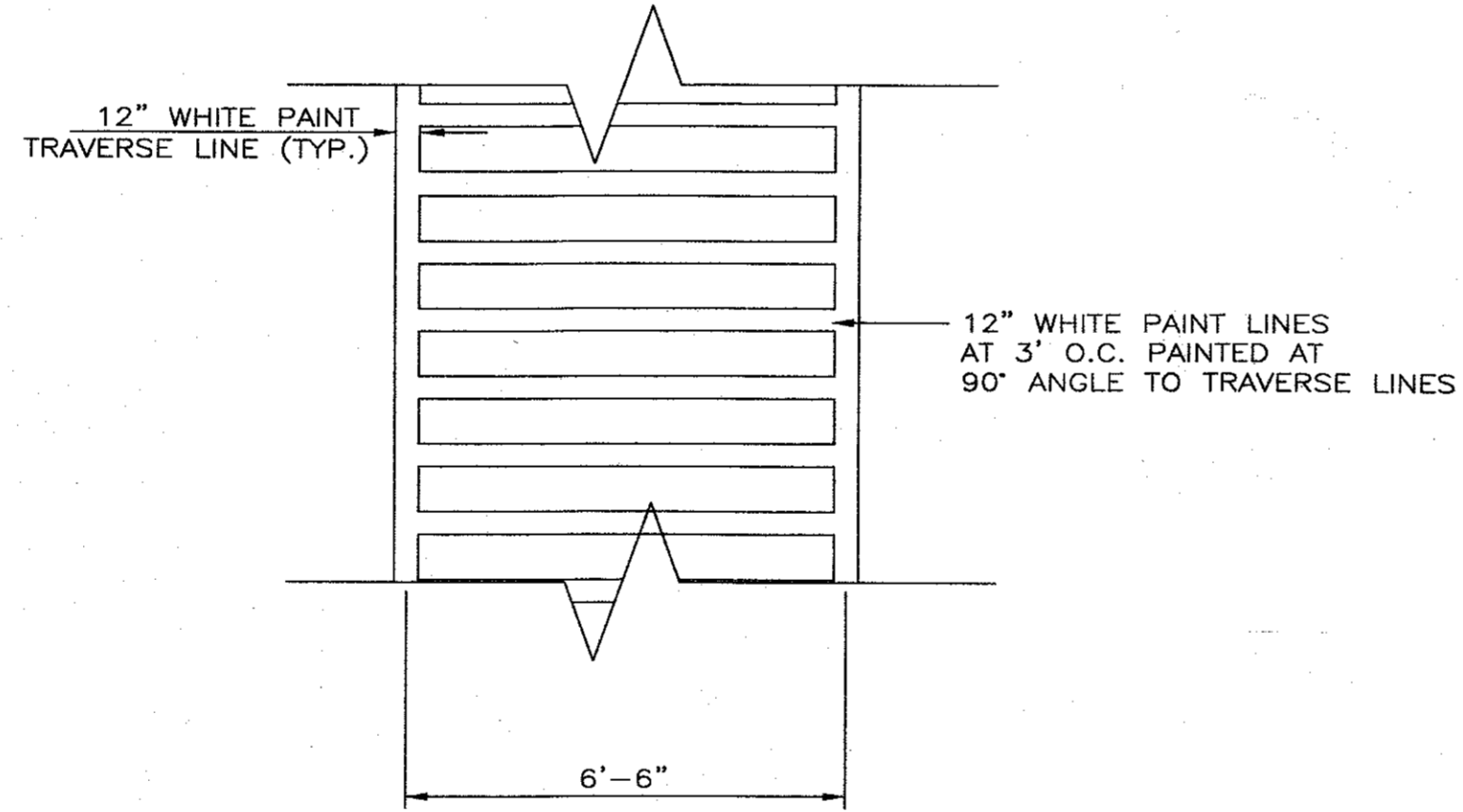
3 HATCH PAINTING DETAIL
NOT TO SCALE



4 TYPICAL PAVEMENT MARKINGS
NOT TO SCALE

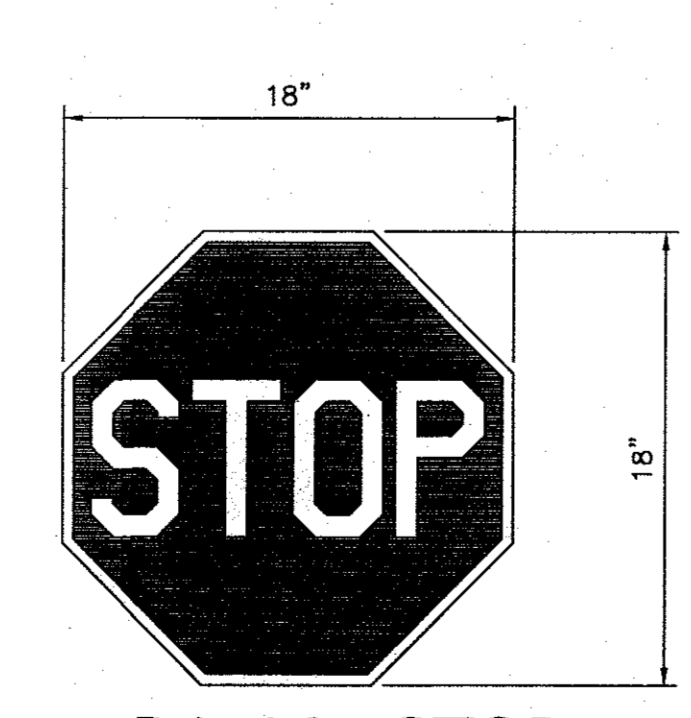


5 TYPICAL ACCESSIBLE PARKING SIGN
NOT TO SCALE



- NOTES:**
1. SEE SITE PLAN FOR CROSSWALK LOCATION AND DIMENSIONS.
 2. APPLY TWO COATS OF PAINT ON ALL SURFACES.

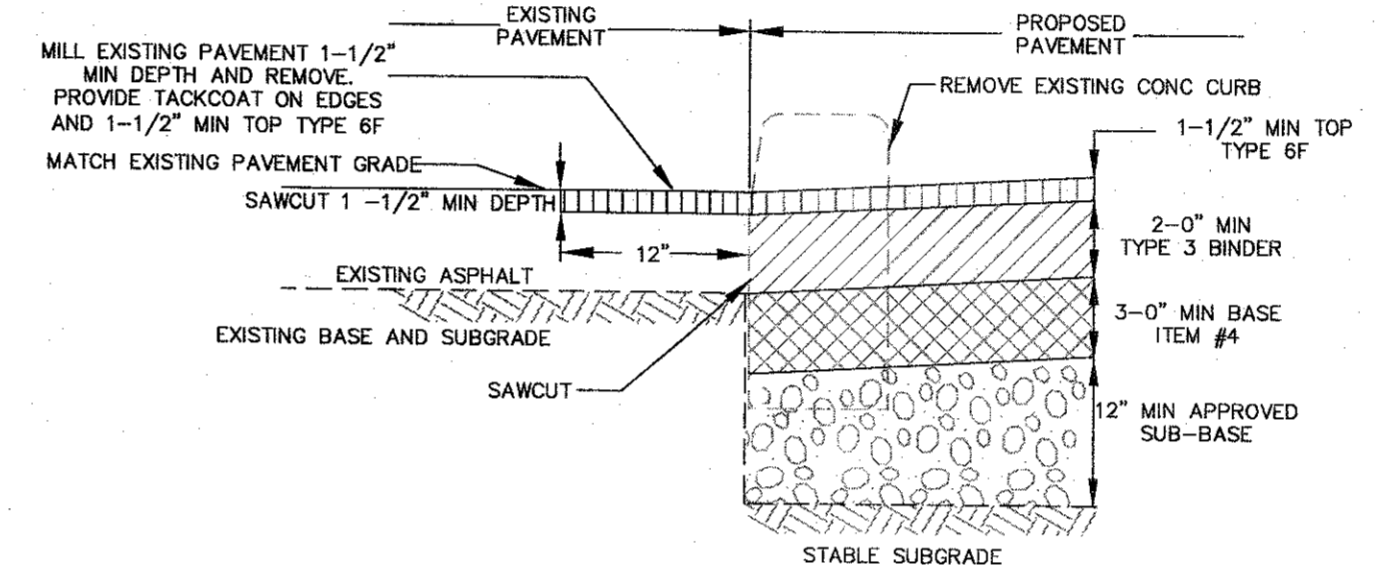
6 TYPICAL CROSSWALK PAINTING DETAIL
NOT TO SCALE



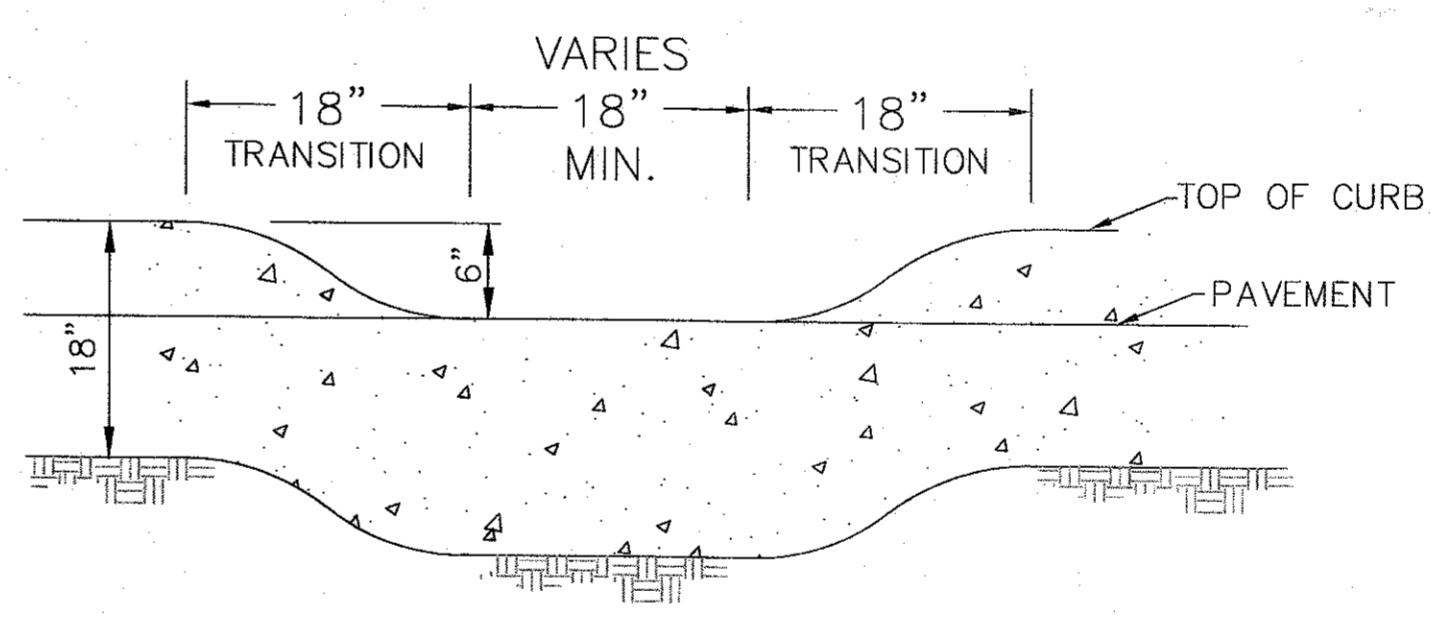
7 R1-1A: STOP SIGN DETAIL
NOT TO SCALE



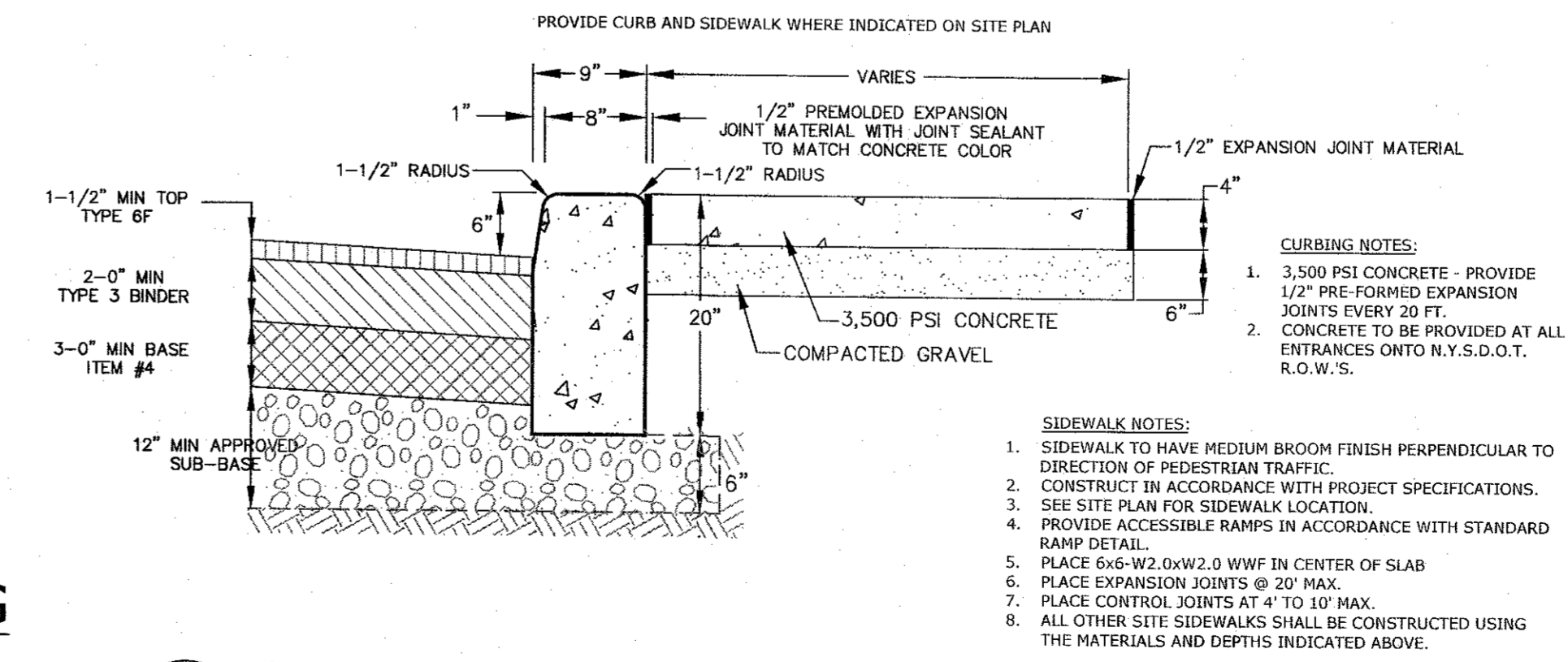
8 R3-8: NO PARKING SIGN DETAIL
NOT TO SCALE



9 TYPICAL PAVEMENT CONNECTION DETAIL
NOT TO SCALE



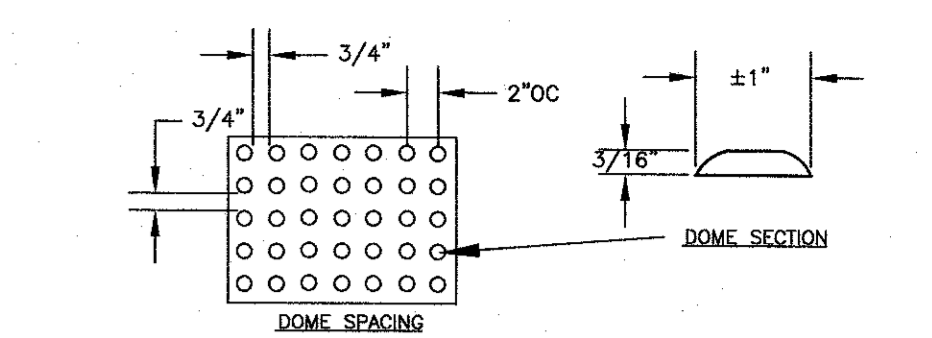
10 TYPICAL DROP CURB DETAIL
NOT TO SCALE
SEE SITE PLAN FOR FULL DETAIL



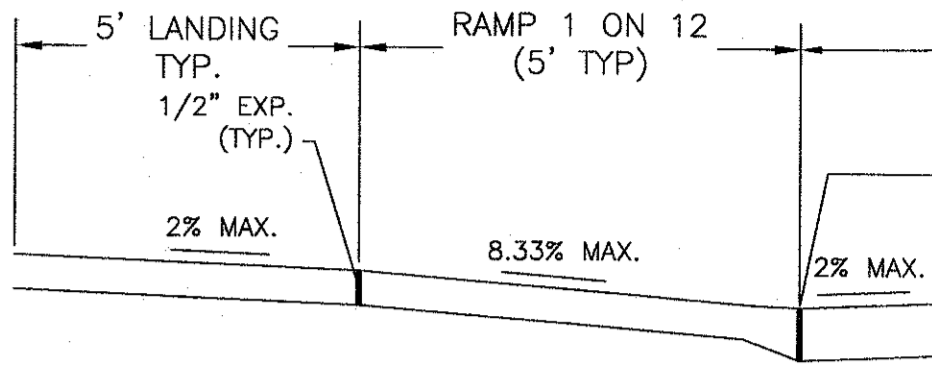
11 SITE PAVEMENT & CONCRETE CURB DETAIL
NOT TO SCALE

Curb Ramp Notes:

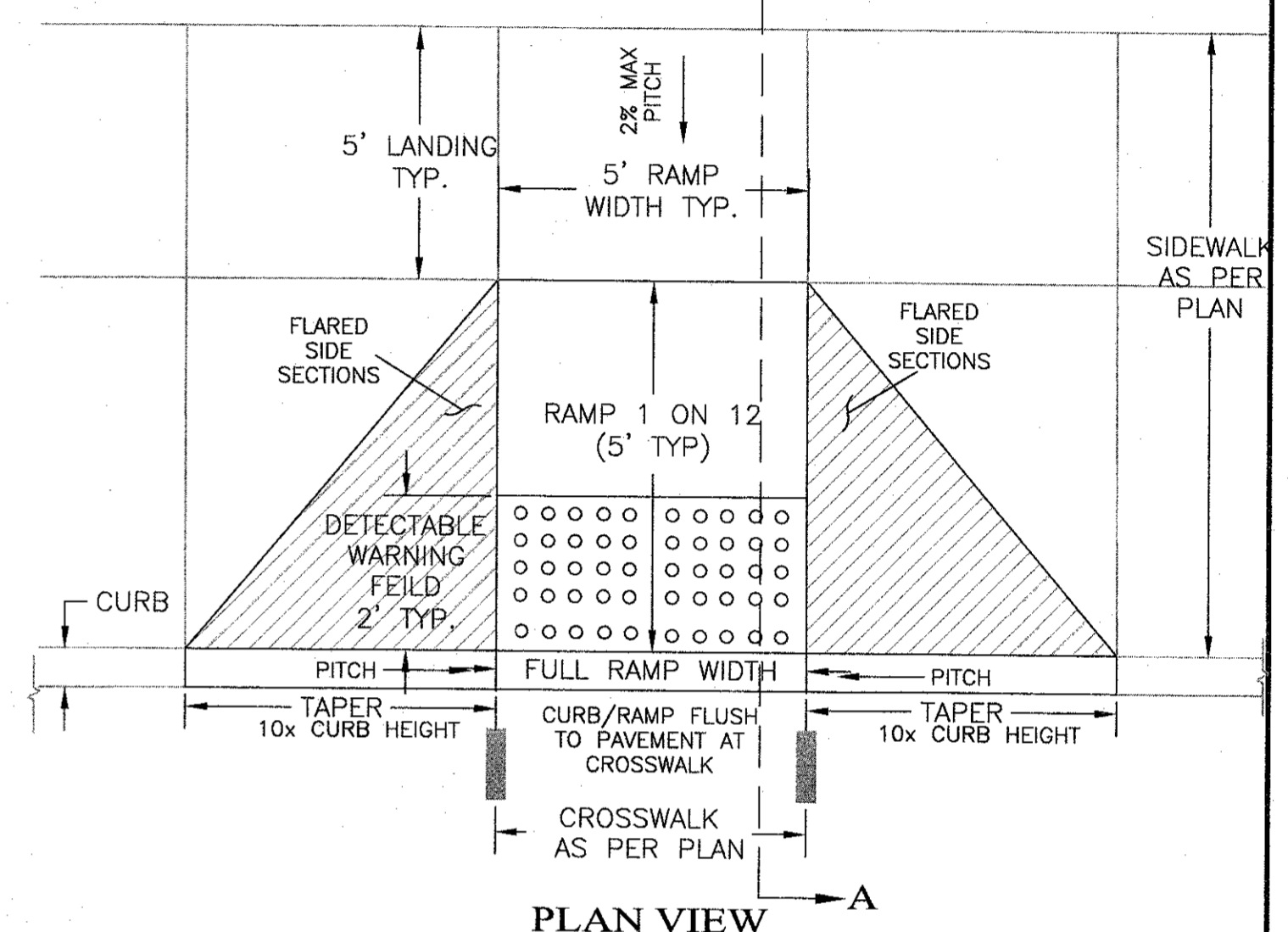
1. A curb ramp is defined as the entire concrete surface which includes the ramp & flared sides. The minimum 5' wide center portion, including the detectable surface, shall have a sloped plane of 8.33% (1:12) maximum, and cross slope, not to exceed 2%. The "flared side" of the ramp shall lie on a slope of 10% (1:10) maximum measured along the curb. The curb ramp shall have a surface tolerance of 1/4" per 10 foot straight edge maximum.
2. The ramp center line and path of travel should be parallel to the sidewalk whenever possible. The full width of the ramp shall lie within the crosswalk area. It is desirable that the location of the ramp be as close as possible to the center of the crosswalk.
3. Existing utility boxes and covers shall be adjusted flush with the curb ramp surface and shall not straddle any change in plane or material. Existing utility box frames and covers shall have matching surface finish on the entire frame and cover. New utility boxes shall not be placed within the detectable border.
4. The surface of the curb ramp and detectable surface material shall be stable, firm and slip resistant. Detectable warning fields shall visually contrast with adjoining surfaces either light on dark or dark on light. The concrete curb ramp surface shall be broom finished transverse to the axis of the ramp and shall be slightly rougher than the finish of the adjacent sidewalk surface.
5. A level landing 5'-0" deep, with a 2% maximum slope in each direction shall be provided at the upper end of each curb ramp to allow safe egress from the ramp surfaces. The width of the level landing shall be at least as wide as the width of the ramp.
6. Seal all joints on sidewalk and ramps. Maximum width of expansion joint is 1/2"



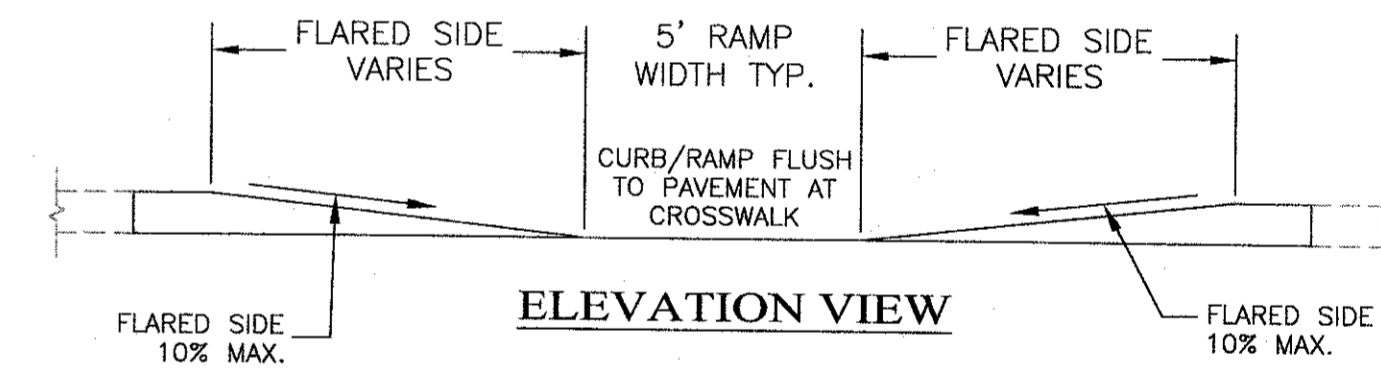
DETECTABLE WARNING FIELD DETAIL



SECTION A-A



PLAN VIEW



ELEVATION VIEW

12 DEPRESSED RAMP/DETECTABLE WARNING DETAIL
NOT TO SCALE

MAP REVISION DATES		
DATE	REVISION	BY
03-27-2017	ADDED 'SEE SITE PLAN FOR FULL DETAIL' UNDER DETAIL 10	SL
04-04-2017	DETAIL 10 CHANGED FROM 18" TO VARIES 18" MIN.	SL

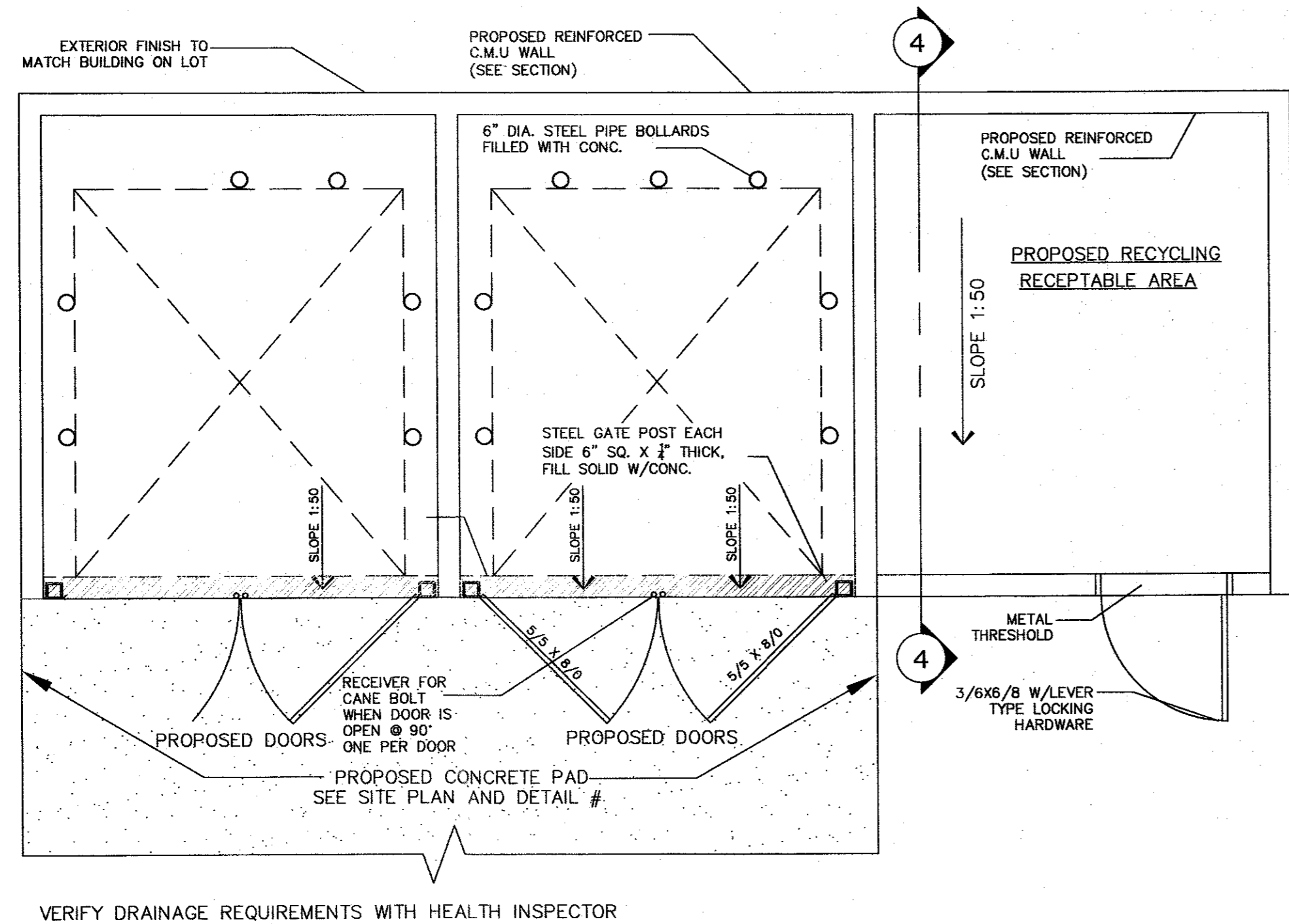
SITE DETAILS
FOR SENIOR HOUSING AT
21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016

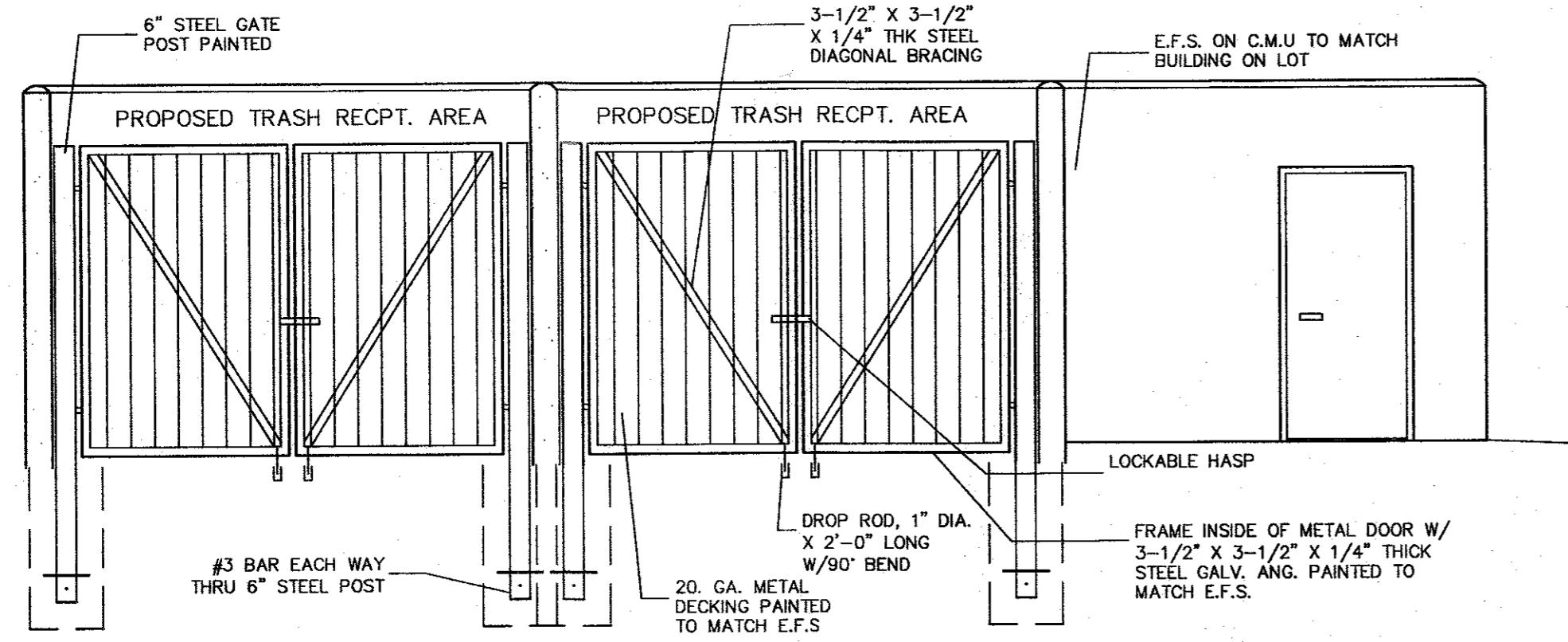
MEDENBACH & EGGERS
CIVIL ENGINEERING & LAND SURVEYING, P.C.
STONE RIDGE, NEW YORK (845) 687-0047

Barry Medenbach
BARRY MEDENBACH, P.E.
NEW YORK LIC. NO. 60142

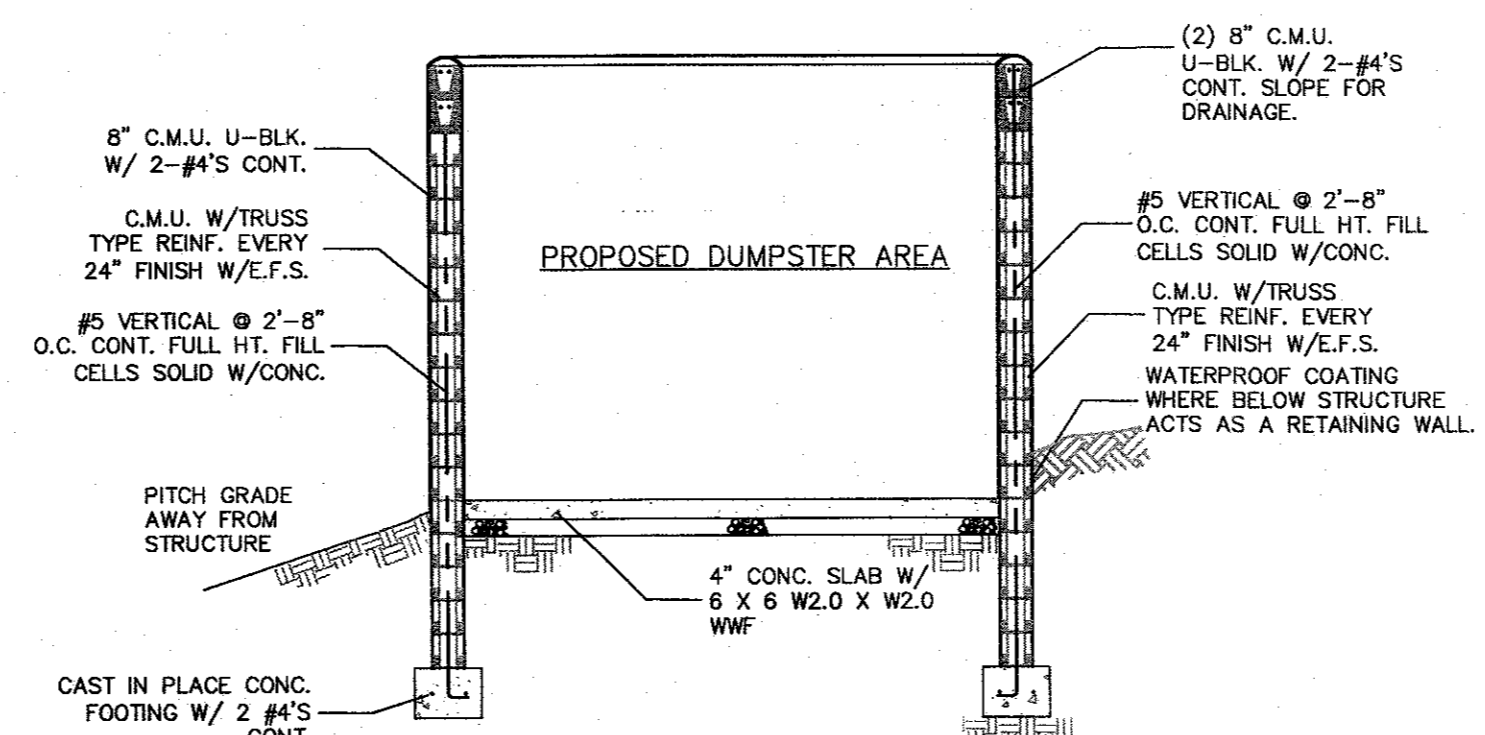
SHEET 12 OF 17



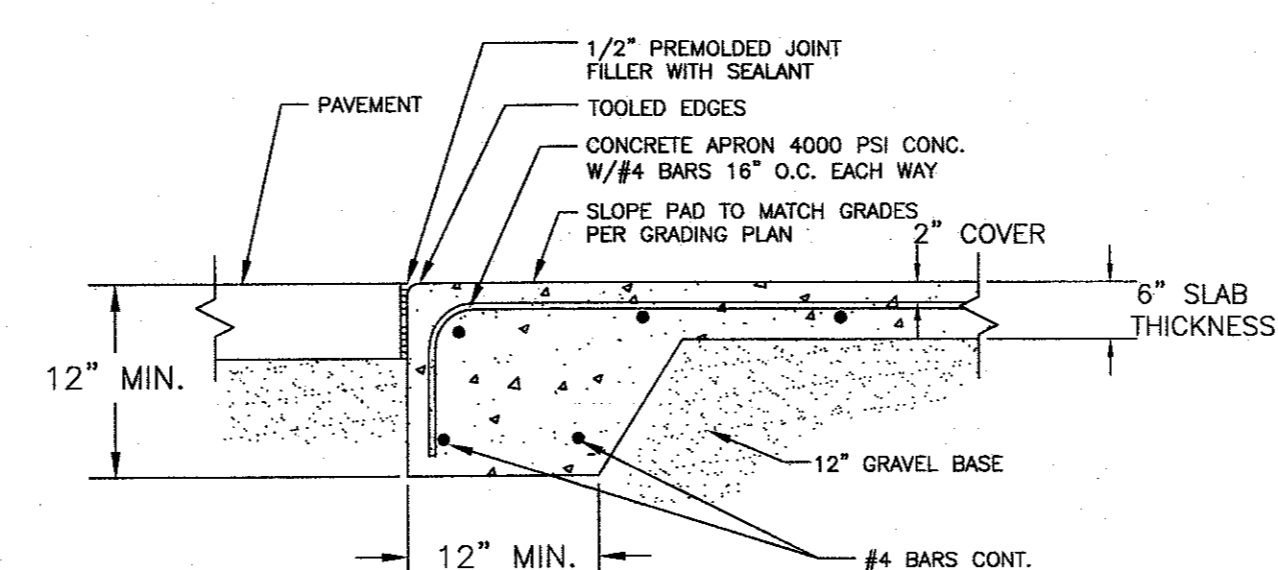
1 DUMPSTER RECEPTACLE SCREEN PLAN
SCALE: NOT TO SCALE



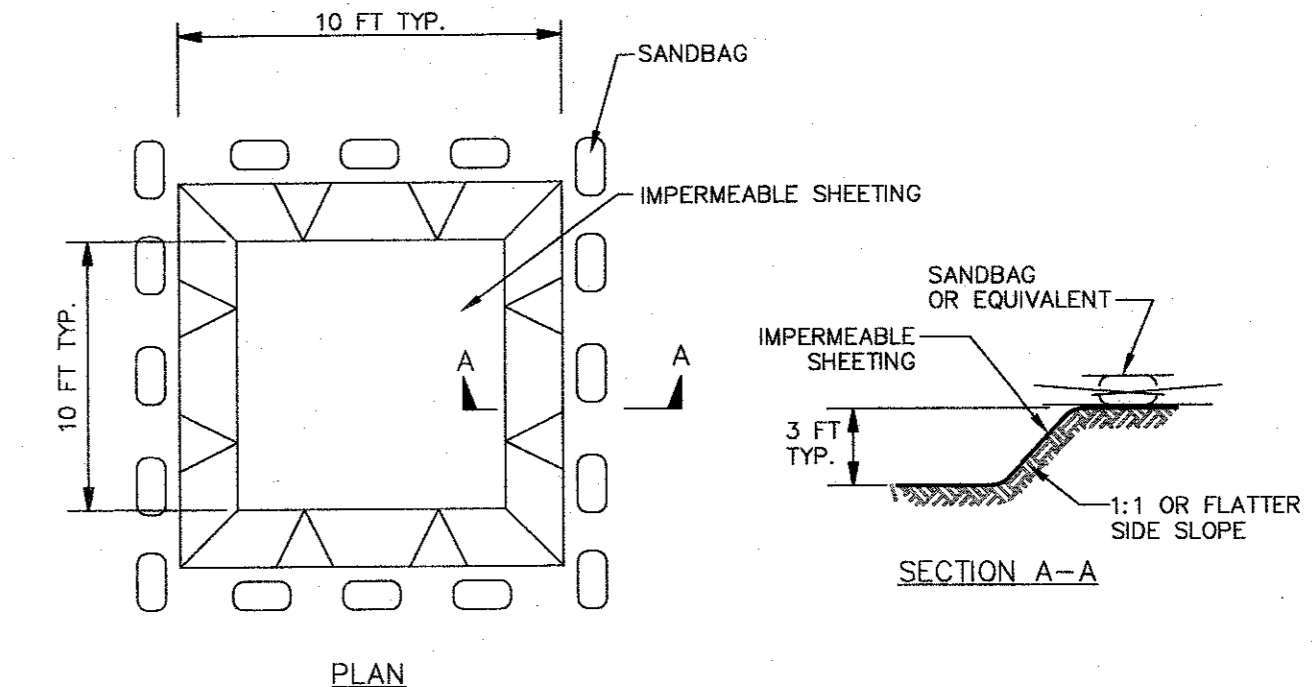
2 DUMPSTER RECEPTACLE SCREEN ELEVATION
SCALE: NOT TO SCALE



3 DUMPSTER RECEPTACLE SCREEN SECTION
SCALE: NOT TO SCALE



4 DUMPSTER CONCRETE PAD DETAIL
NOT TO SCALE



5 CONCRETE WASHOUT DETAIL
NOT TO SCALE

- CONSTRUCTION SPECIFICATIONS**
1. DESIGNATED TEMPORARY, BELOW GROUND CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AS SHOWN ABOVE. WASHOUTS WILL BE CENTRALLY LOCATED AT THE DISCRETION OF THE INDIVIDUALS WHO MANAGE DAY TO DAY CONSTRUCTION ACTIVITIES. WASHOUTS SHALL HAVE A MINIMUM LENGTH AND WIDTH OF 10 FEET BUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LIQUID CONCRETE WASTES GENERATED FROM WASHOUT OPERATIONS. THE WASHOUT AREAS WILL BE LINED WITH PLASTIC SHEETING AT LEAST 10 MILS THICK AND FREE OF ANY HOLES OR TEARS. SIGNS WILL BE POSTED MARKING THE LOCATION OF THE WASHOUT AREAS.
 2. TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE LOCATED A MINIMUM OF (50 FEET) FROM DRAIN INLETS.
 3. KEEP THE WASHOUT AREAS WILL BE INSPECTED DAILY TO ENSURE THAT ALL CONCRETE WASHING IS BEING DISCHARGED INTO THE WASHOUT AREA, NO LEAKS OR TEARS ARE PRESENT, AND TO IDENTIFY WHEN CONCRETE WASTES NEED TO BE REMOVED. THE WASHOUT AREAS WILL BE CLEANED OUT ONCE THE AREA IS FILLED TO 75 PERCENT OF THE HOLDING CAPACITY. ONCE THE AREA'S HOLDING CAPACITY HAS BEEN REACHED THE CONCRETE WASTES WILL BE ALLOWED TO HARDEN, THE CONCRETE WILL BE BROKEN UP, REMOVED, AND DISPOSED IN ACCORDANCE WITH LOCAL REGULATIONS. THE PLASTIC SHEET WILL BE REPLACED IF TEARS OCCUR DURING REMOVAL OF CONCRETE WASTES FROM THE WASHOUT AREA.

MAP REVISION DATES		
DATE	REVISION	BY

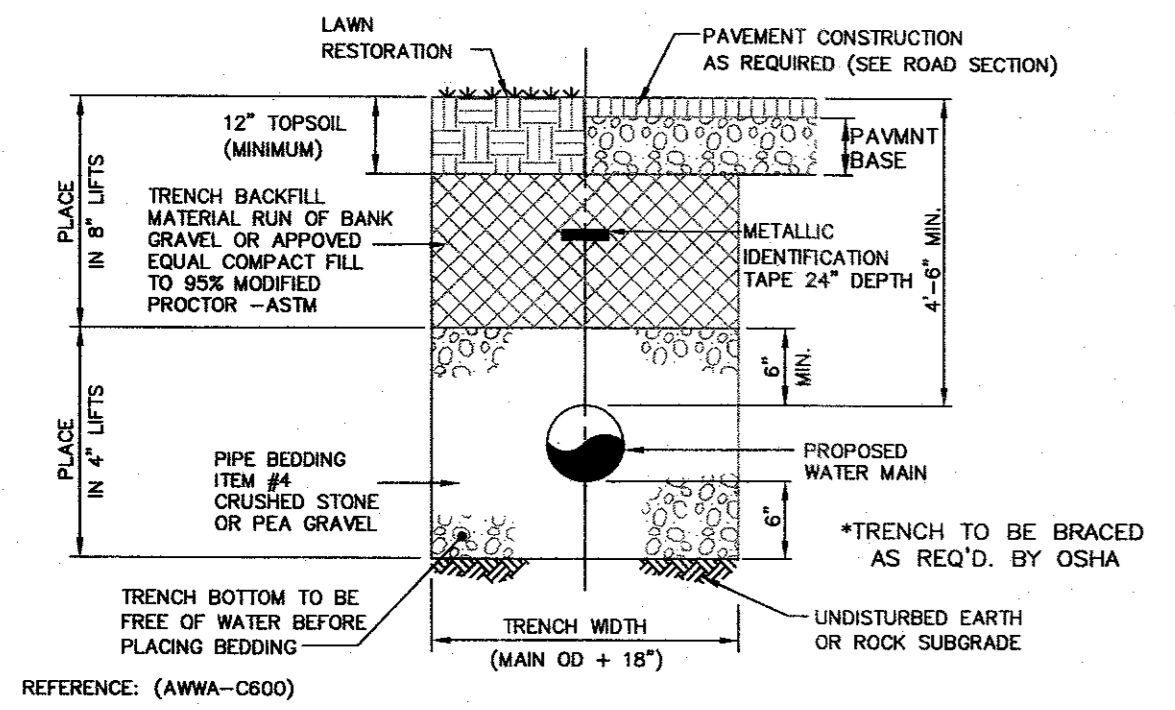
SITE DETAILS
FOR SENIOR HOUSING AT
21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016

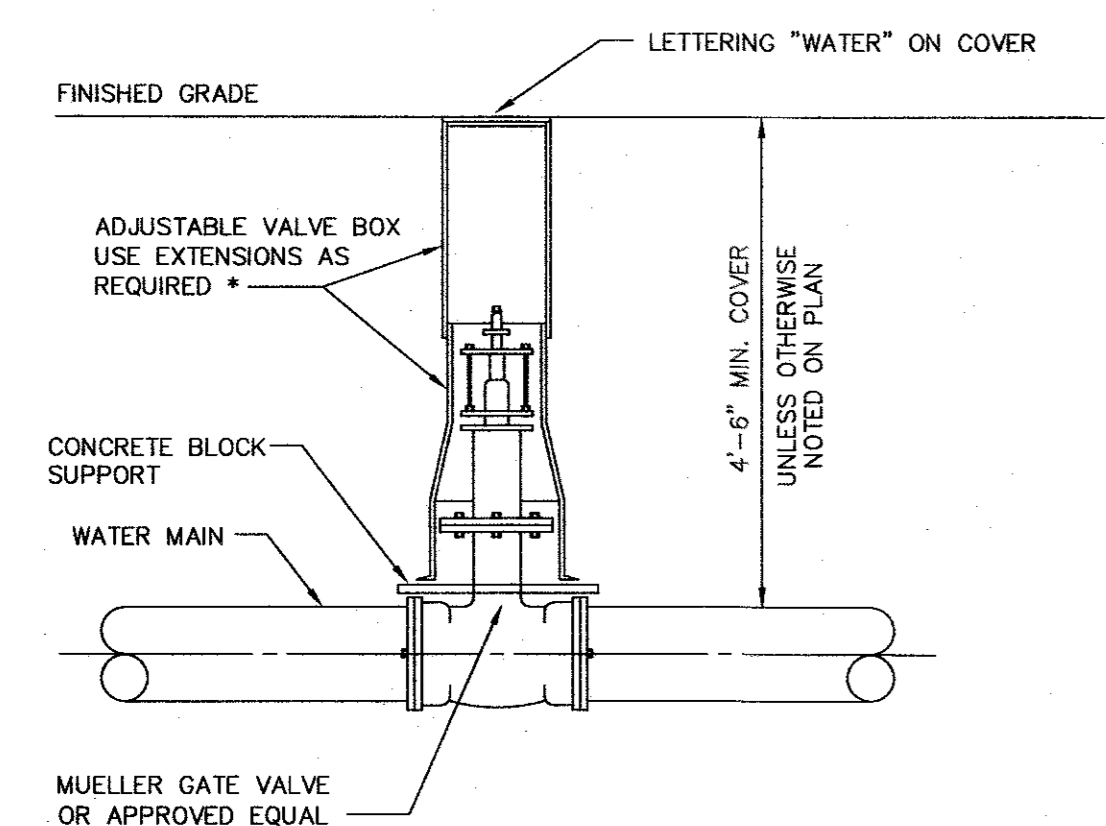
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Barry Medenbach
BARRY MEDENBACH, P.E.
NEW YORK S.I.C. NO. 60142

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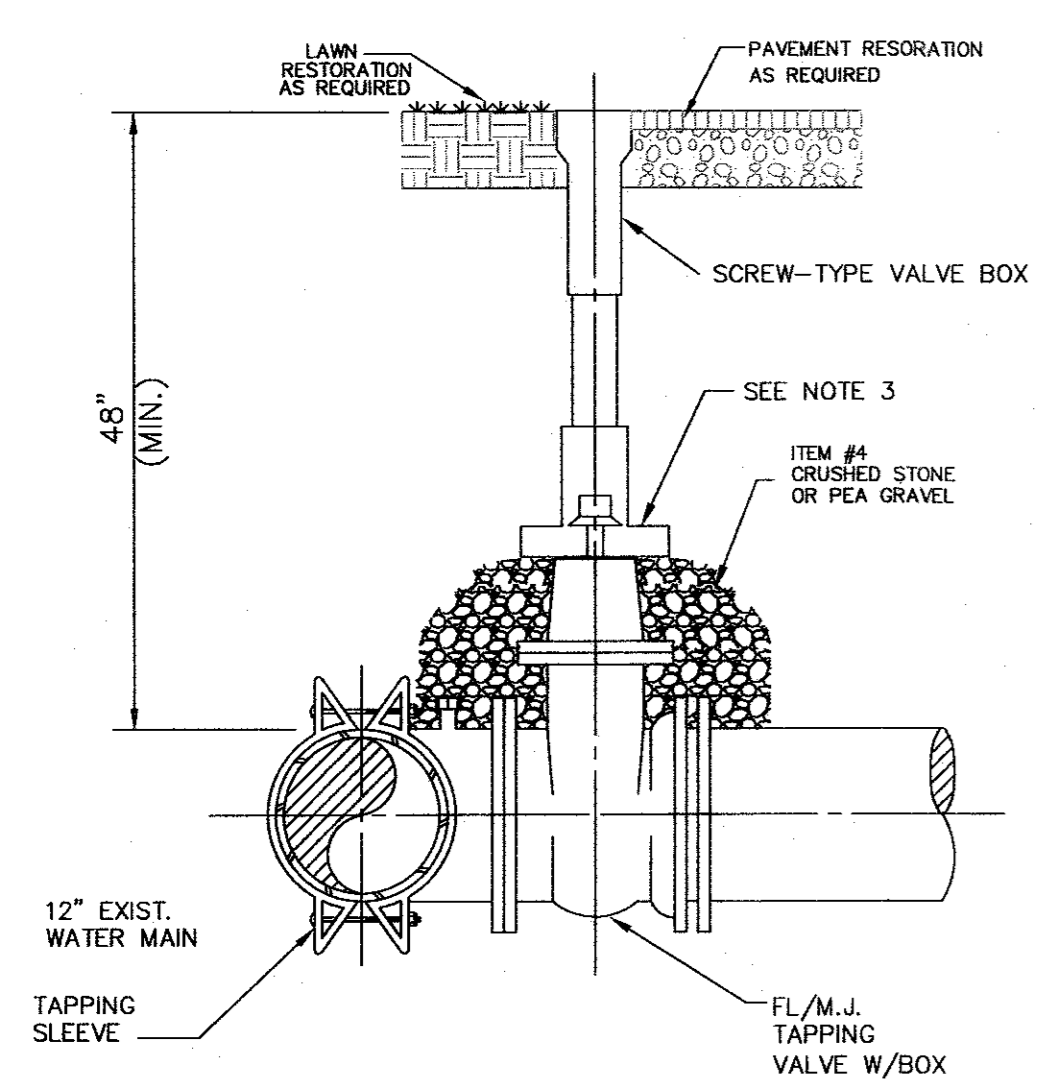


1 TYPICAL WATER MAIN TRENCH DETAIL
NOT TO SCALE



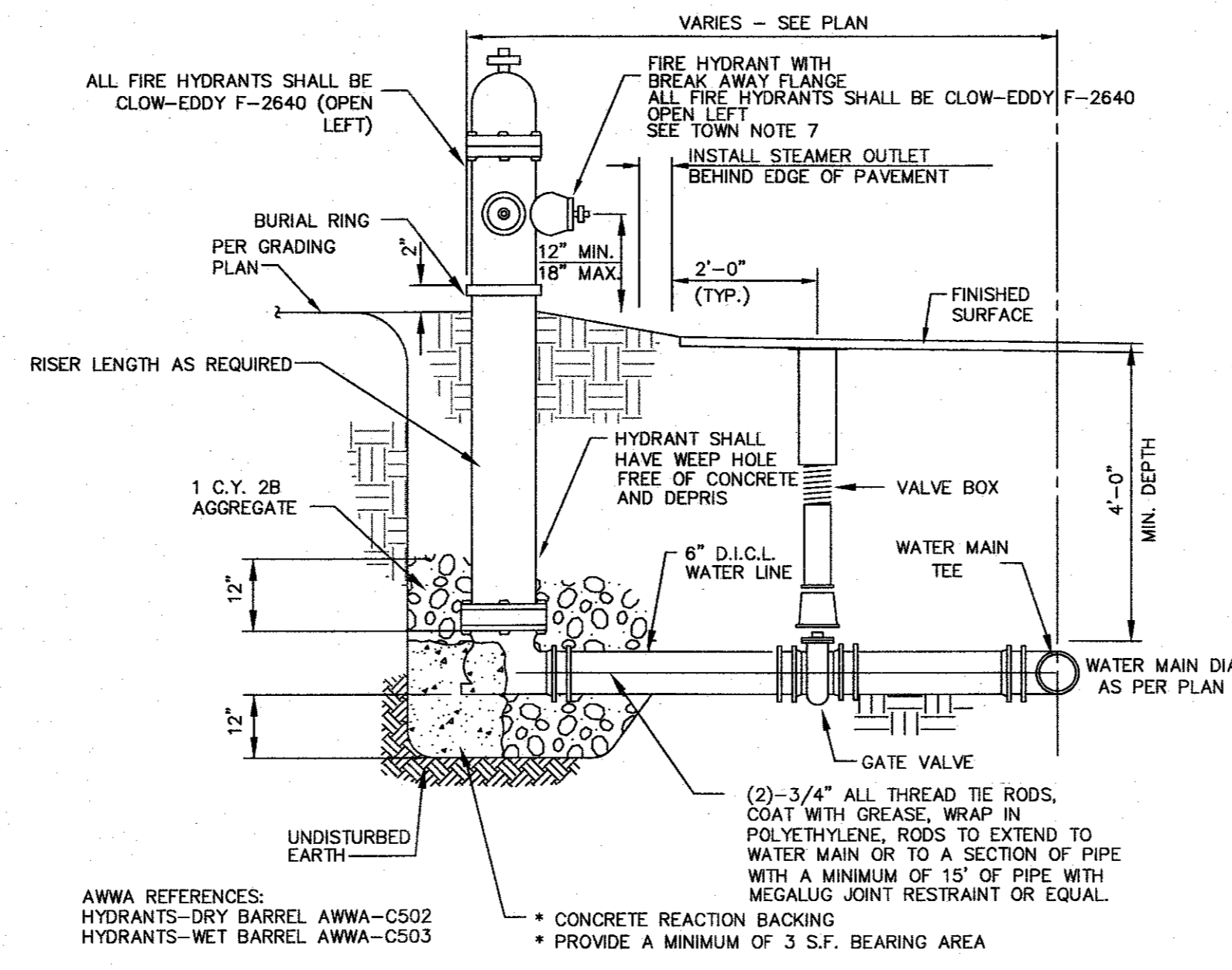
- * NOTE:**
- IF EXTENSIONS ARE NECESSARY CONTRACTOR SHALL SET "PLUMB" AND ALIGN PROPERLY FOR ACCESS TO OPERATING NUT.
 - VALVES-METAL SEATED (AWWA-C500) VALVES-RESILIENT SEAT (AWWA-C509)

2 TYPICAL GATE VALVE DETAIL
NOT TO SCALE
SEE TOWN NOTE 5



- NOTES:**
- RESILIENT WEDGE GATE VALVE SHALL BE EPOXY COATED.
 - TAPPING SLEEVES SHALL BE CAST IRON.
 - SELF-CENTERING ALIGNMENT RING EQUIVALENT TO AMERICAN FLOW CONTROL.
 - MEGA LUGS REQUIRED FOR ALL FITTINGS

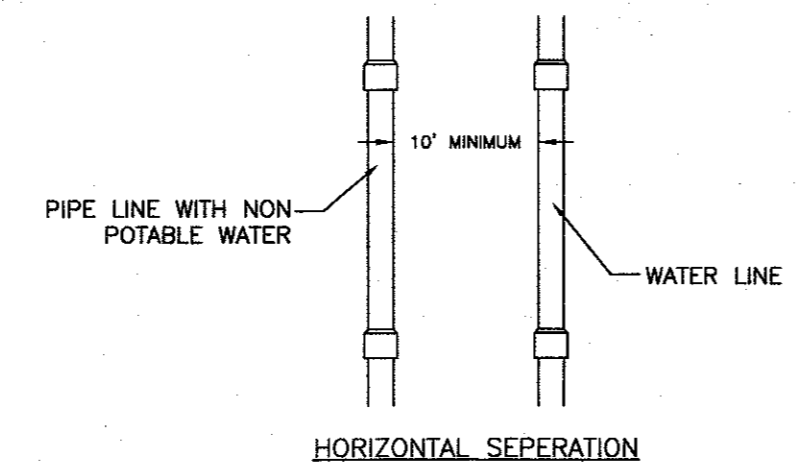
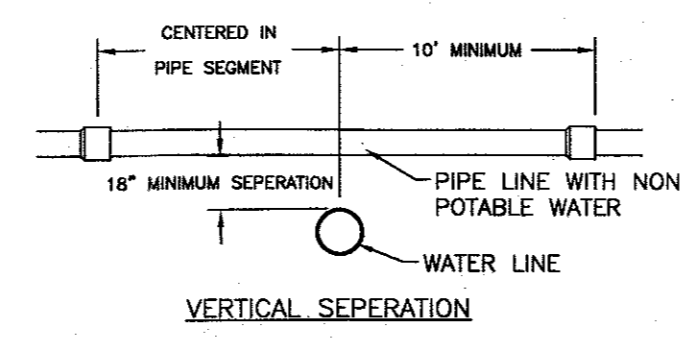
3 TYPICAL WET TAP DETAIL
NOT TO SCALE
SEE TOWN NOTE 6



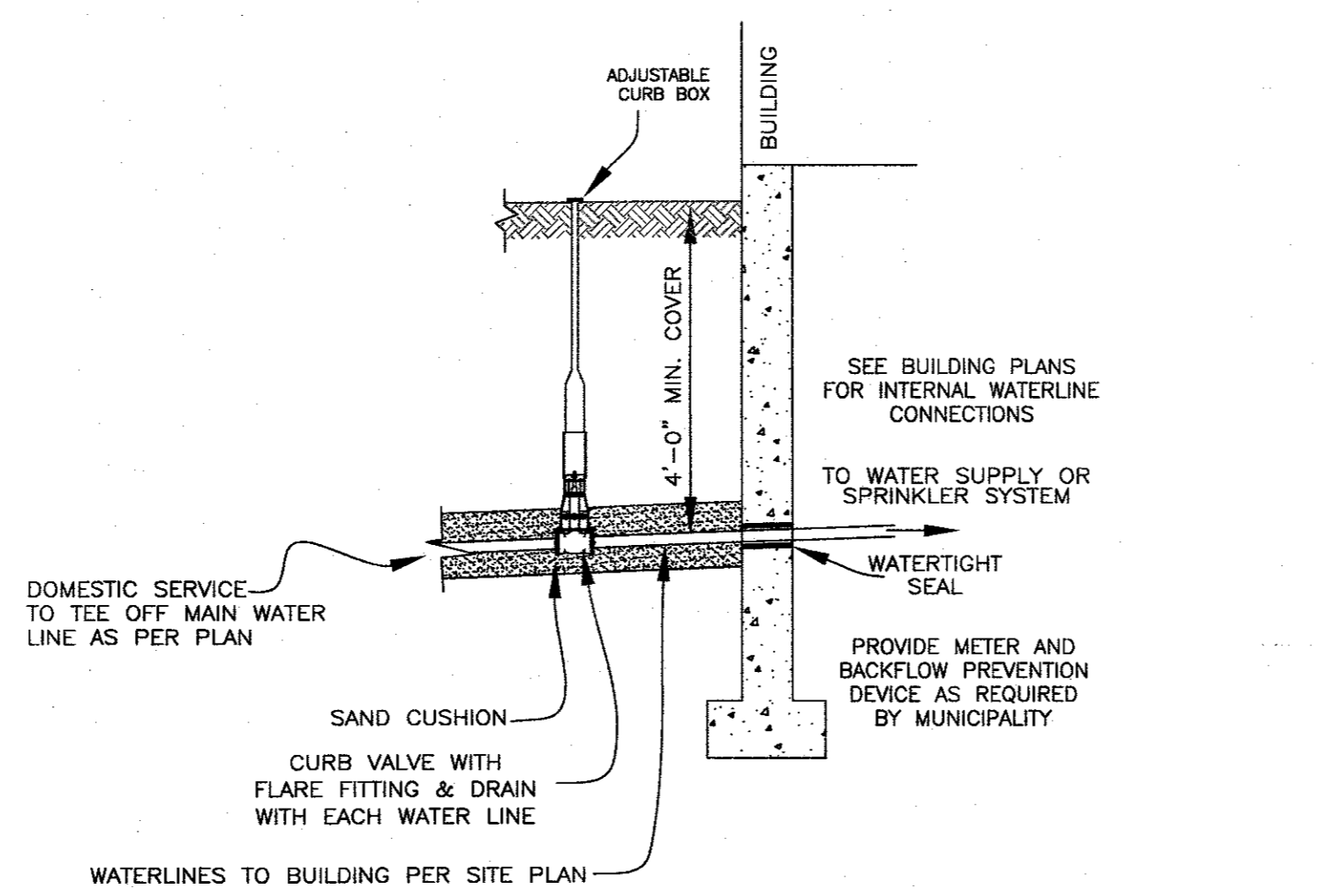
AWWA REFERENCES:
HYDRANTS-DRY BARREL AWWA-C502
HYDRANTS-WET BARREL AWWA-C503

NOTE: IF HIGH GROUND WATER IS ENCOUNTERED, THE HYDRANT DRAIN HOLE SHOULD BE PLUGGED AND THE HYDRANT MARKED OR LABELED TO INDICATE THAT THE BARREL MUST BE PUMPED OUT AFTER USE TO PREVENT DAMAGE FROM FREEZING

4 TYPICAL FIRE HYDRANT DETAIL
NOT TO SCALE



5 WATERLINE SEPERATION
NOT TO SCALE



6 TYPICAL WATER LINE CONNECTION
NOT TO SCALE

Water Main Notes and Specifications

General Provisions:

- All water lines shall be Class 52 ductile (AWWA C151) iron pipe unless otherwise noted or approved by engineer. All ductile fittings are to meet AWWA Standards C110.
- The most recent revision of the AWWA standards are to be used.

Ductile Iron Pipe	C151
Valves - Metal Seated	C500
Hydrants - Wet Barrel	C502
Hydrants - Dry Barrel	C503
Valves-Resilient Seat	C509
Pipe Laying	C600
Hydrostatic Testing	C600
Disinfection	C651
Service Lines, Corp. & Curb Stops	C800
Ductile Iron Fittings	C110
- Water lines shall be equipped with Megalug - series 1100 for pipe restraining, or as required by Town Water Dept.
- All water lines shall be installed a minimum of 4.5 (four and half) feet below grade. The water line may be flexed within pipe specifications or laid deeper in areas where crossings with the sanitary line occur, to achieve the required 18 inch vertical separation distance. (See sewer specifications for further information)
- Water line is to be pressure tested and leakage tested in accordance with Great Lakes Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers' Recommended Standards for Water Works, Section 8.7.6.2012, (AWWA C-600-05).
- Water line is to be disinfected in accordance with Great Lakes Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers' Recommended Standards for Water Works, Section 8.7.6.2012 (AWWA C-651).
- All water lines shall be in compliance with the "No Lead" law for waterworks.
- Whenever pipe laying is not actively in progress, the open ends of the pipe must be closed by a temporary watertight plug or cap to prevent soil, water or other foreign matter from entering the pipe.
- Deflection of pipes at a joint must not exceed 80% of the manufacturers recommended maximum.
- Sufficient notice shall be given to the head of the municipal water department, the private owner or a designated representative of any testing so that they can witness if desired.
- The head of the municipal water department or the private owner or their designated representative must review and accept the testing, hydrostatic and bacteriological, as adequate.
- Bacteriological testing must include two consecutive sets of acceptable samples taken at least 24 hours apart.
 - One from each 1200' of new watermain
 - Once from each branch of the watermain
 - One from each end of the watermain.
- The tablet method of chlorinating the watermain, as described in AWWA, C651 is not acceptable method.
- Refer to sections 8.7.4-13 of the "Recommended Standards for Water Works" for the installation, separation and protection of watermains.

Original 12-06-96 Revised 04-24-02 Revised 01-2015
TOWN OF NEWBURGH WATER SYSTEM NOTES FOR SITE PLANS

- Construction of potable water utilities and connection to the Town of Newburgh water system requires a permit from the Town of Newburgh Water Department. All work and materials shall conform to the requirements of the NYSDOH and the Town of Newburgh.
- All water service lines four (4) inches and larger in diameter shall be cement lined class 52 ductile iron pipe conforming to ANSI/AWWA C151/A21.51 for Ductile Iron Pipe, latest revision. Joints shall be either push-on or mechanical joint as required.
- Thrust restraint of the pipe shall be through the use of joint restraint. Thrust blocks are not acceptable. Joint restraint shall be through the use of mechanical joint pipe with retainer glands. All fittings and valves shall also be installed with retainer glands for joint restraint. Retainer glands shall be EBBA Iron Megalug Series 1100 or approved equal. The use of a manufactured restraint joint pipe is acceptable with prior approval of the Water Department.
- All fittings shall be cast iron or ductile iron, mechanical joint, class 250 and conform to ANSI/AWWA C110/A21.10 for Ductile and Gray Iron Fittings or ANSI/AWWA C153/A21.53 for Ductile Iron Compact Fittings, latest revision.
- All valves 4 to 12 inches shall be Resilient Wedge Gate Valves conforming to ANSI/AWWA C509 such as Mueller Model A-2360-23 or approved equal. All gate valves shall open left (counterclockwise).
- Tapping sleeve shall be mechanical joint such as Mueller H-615 or equal. Tapping valves 4 to 12 inches shall be Resilient Wedge Gate Valves conforming to ANSI/AWWA C509 such as Mueller Model T-2360-19 or approved equal. All tapping sleeves and valves shall be tested to 150 psi minimum; testing of the tapping sleeve and valve must be witnessed and accepted by the Town of Newburgh Water Department prior to cutting into the pipe.
Original 12-06-96 Revised 04-24-02 Revised 01-2015
- All hydrants shall be Clow-Eddy F-2640 conforming to AWWA Standard C-502, latest revision. All hydrants shall include a 5/8 inch main valve opening, two 2 1/2 inch diameter NPT hose nozzles, one 4 inch NPT steamer nozzle, a 6 inch diameter inlet connection and a 1 1/2 inch pentagon operating nut. All hydrants shall open left (counterclockwise). Hydrants on mains to be dedicated to the Town shall be Equipment Yellow. Hydrants located on private property shall be Red.
- All water service lines two (2) inches in diameter and smaller shall be Type K copper tubing. Corporation stops shall be Mueller H-15020N for 3/4 and 1 inch, Mueller H-15000N or B-25000N for 1 1/2 and 2 inch sizes. Curb valves shall be Mueller H-1502-2N for 3/4 and 1 inch and Mueller B-25204N for 1 1/2 and 2 inch sizes. Curb boxes shall be Mueller H-10314N for 3/4 and 1 inch and Mueller H-10310N for 1 1/2 and 2 inch sizes.
- All pipe installation shall be subject to inspection by the Town of Newburgh Water Department. The contractor shall be responsible for coordinating all inspections as required with the Town of Newburgh Water Department.
- The water main shall be tested, disinfected and flushed in accordance with the Town of Newburgh requirements. All testing, disinfection and flushing shall be coordinated with the Town of Newburgh Water Department. Prior to putting the water main in service satisfactory sanitary results from a certified lab must be submitted to the Town of Newburgh Water Department. The test samples must be collected by a representative of the testing laboratory and witnessed by the Water Department.
- The final layout of the proposed water and/or sewer connection, including all materials, size and location of service and all appurtenances, is subject to the review and approval of the Town of Newburgh Water and/or Sewer Department. No permits shall be issued for a water and/or sewer connection until a final layout is approved by the respective Department.

Water Main Notes and Specifications Continued

Pressure Test Procedure:

- After trench has been backfilled, hydrostatic acceptance tests, consisting of a pressure test and a leakage test shall be performed on all sections of water mains installed. Leakage test shall be conducted concurrently with pressure test. Test section shall be limited to about 2000 ft (max) unless otherwise approved by the engineer.
- After all tests and inspections have been performed evidence of compliance shall be forwarded to owner/engineer prior to acceptance.
- All water for tests shall be furnished and disposed of by the contractor at the contractor's expense. Source and/or quality of water which the contractor proposes to use in testing lines shall be acceptable to the engineer.
- For the pressure test, system shall be pressurized and maintained at a minimum of 150 psi, or 1.5 times the working pressure, whichever is greater, based on the elevation of the lowest point in the section being tested and corrected to the elevation of the gauge. Provisions shall be made to relieve air trapped at high points in the system through adjacent hydrants or through taps and corporation stops installed for this purpose by the contractor. After said pressure has been maintained successfully, with further pumping as required, for a period of at least two hours. The section under test shall be considered to have passed the pressure test.
- Leakage test shall be performed concurrently using a minimum test pressure of 150 psi, or 1.5 times the working pressure, whichever is greater. Based on the elevation of the lowest point in the section under test and corrected to elevation of the gauge, leakage test duration shall be a minimum of 2 hours after leakage rate has stabilized.
- Maximum allowable leakage shall be as shown in the following table: allowable leakage per 1000 ft of pipeline per hour (gph)

Avg Test Pressure	Nominal Pipe Dia. Inches		
	2"	4"	6"
PSI (BAR)			
450 (31)	0.32	0.64	0.96
400 (28)	0.30	0.60	0.90
350 (24)	0.28	0.56	0.84
300 (21)	0.26	0.52	0.78
275 (19)	0.25	0.50	0.75
250 (17)	0.24	0.47	0.71
225 (16)	0.23	0.45	0.68
200 (14)	0.21	0.43	0.64
175 (12)	0.20	0.40	0.59
150 (10)	0.19	0.37	0.55
125 (9)	0.17	0.34	0.50
100 (7)	0.15	0.30	0.45

Disinfection Procedure:

- Water from an approved source of supply shall be made to flow at a constant rate in to the newly laid water main.
- Water entering the new main shall receive a dose of chlorine fed at a constant rate such that the water will not have less than 25 mg/l free chlorine.
- Measure chlorine concentration at regular intervals. Chlorine application shall not cease until the entire main is filled with heavily chlorinated water. The chlorinated water shall be retained for a minimum of 24 hours. The treated water in all portions of the main at the end of the 24 hour period shall have a residual of not less than 10 mg/l free chlorine.
- After all tests and inspections have been performed evidence of compliance shall be forwarded to owner/engineer prior to acceptance.

Service Pipe Connections:

- Corporation stops for three-fourths-inch and one-inch service lines shall be Mueller H-15008 conductive compression or equal. Corporation stops for one-and-one-half-inch and two-inch service lines shall be Mueller H-15013 conductive compression or equal. Corporation stops shall be in accordance with AWWA C800, latest revision.
- Curb stops for three-fourths-inch through two inch shall be mueller H-15219 conductive compression, with drain or equal. Curb stops shall be provided with an extension service box to grade. Curb stops shall be in accordance with AWWA C800, latest Revision.
- Underground service lines for sizes three-fourths-inch through two-inch shall be Type K copper, supplied in conformance with ASTM 888, in accordance with AWWA C800, latest revision.
- Service Connections or water main extension connections of three inch or larger shall be made by means of approved tapping sleeve and tapping valve. Mechanical joint tapping sleeves shall be provided with duck-tipped end gaskets. Outlet flange be class 125, ANSI B16.1.

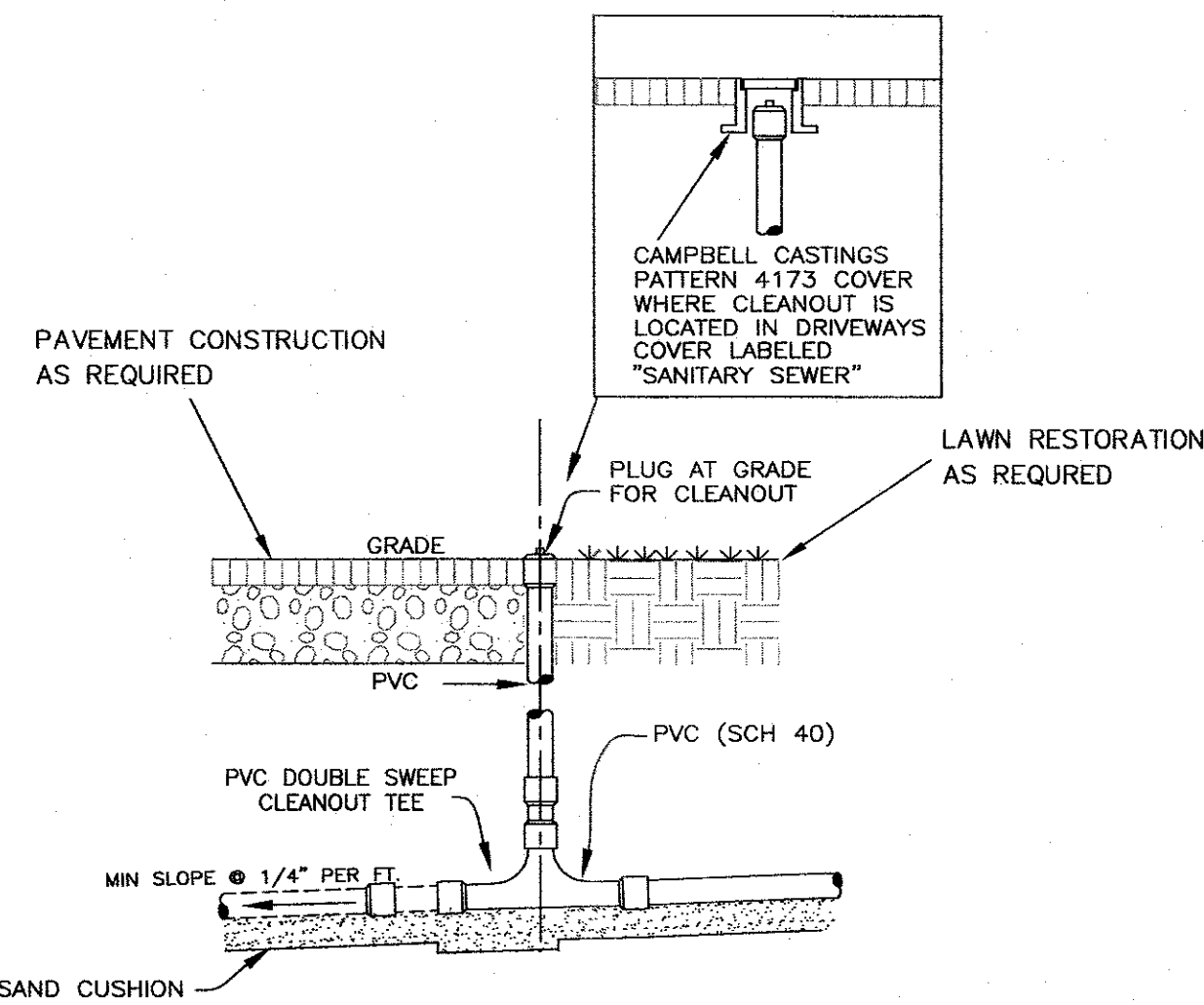
MAP REVISION DATES		
DATE	REVISION	BY
03-27-2017	ADDED TOWN OF NEWBURGH WATER NOTE; REMOVED TEE THRUST BLOCK, HORIZONTAL AND UPWARD BEND, AND DOWNWARD BEND DETAILS; ADDED 'SEE TOWN NOTES' ON DETAIL 2 & 3; CORRECTED FIRE HYDRANT TYPE PER TOWN NOTES ON DETAIL 7	SL
04-04-2017	CORRECTED P.3 OF GENERAL PROV. TO MATCH TOWN REQUIREMENTS	SL

WATER DETAILS
FOR SENIOR HOUSING AT
21 LAKESIDE PROPERTIES INC.
SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016

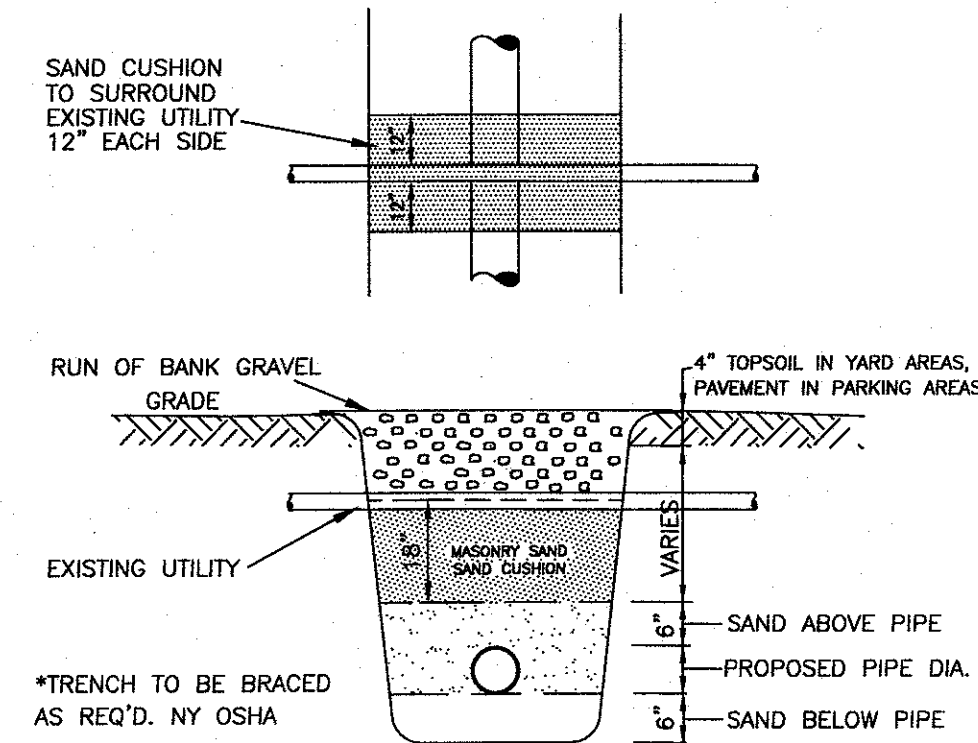
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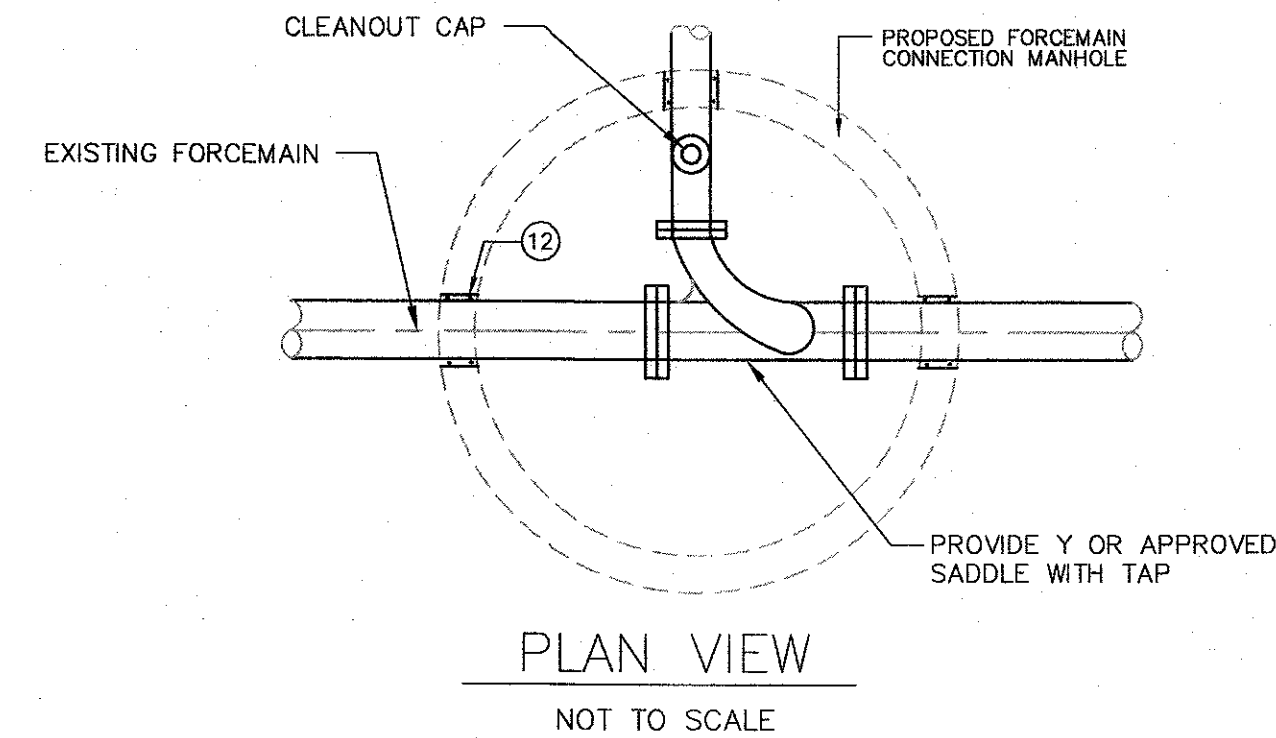
W:\Medenbach\Projects\Clients\Active\ENGINEERING\4 0771 LAKESIDE PROPERTIES\030716\27 SPINDR HSNG.dwg, 4/5/16, 11:26:30 AM



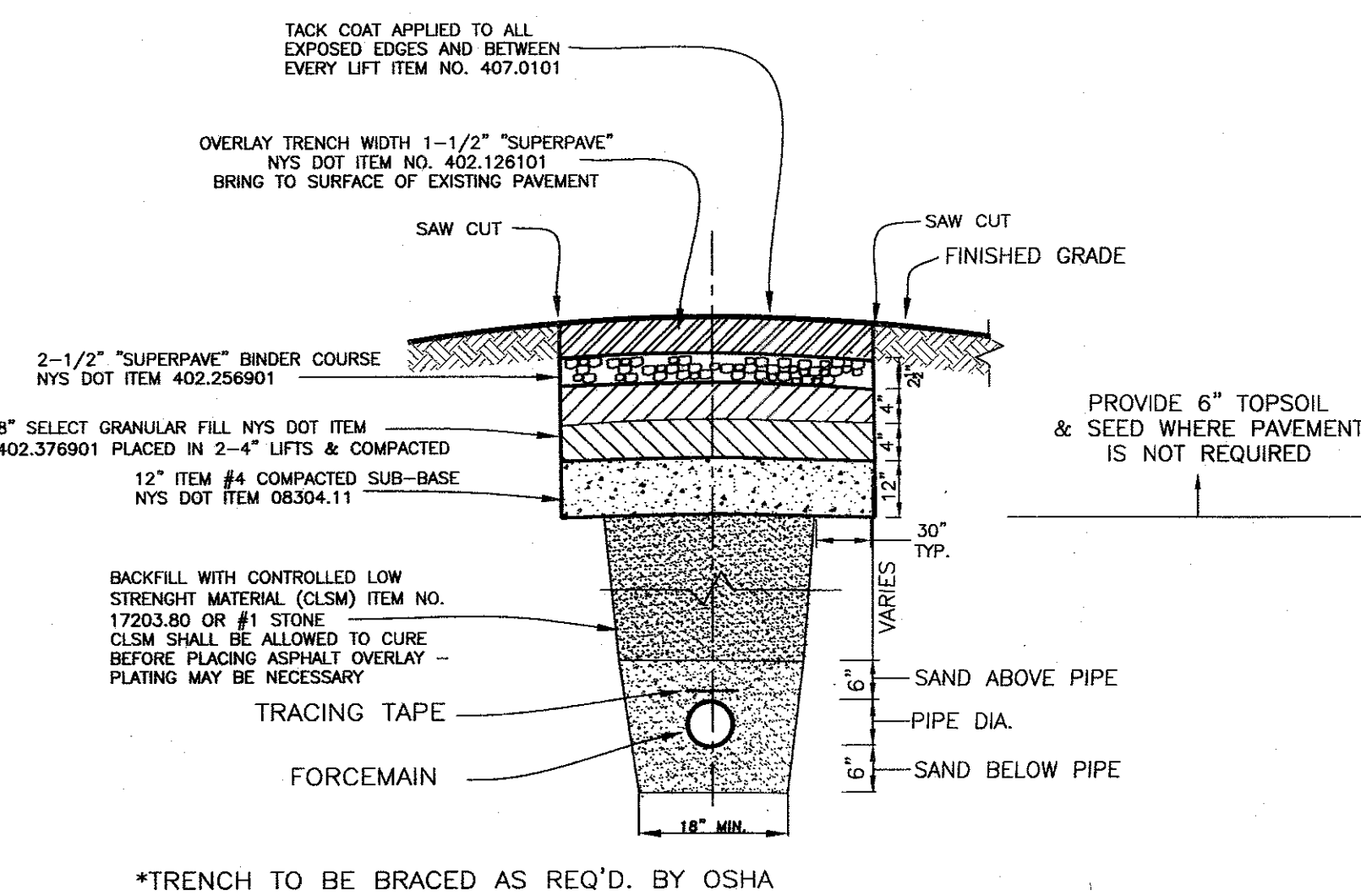
1 SEWER LATERAL CLEANOUT DETAIL
NOT TO SCALE



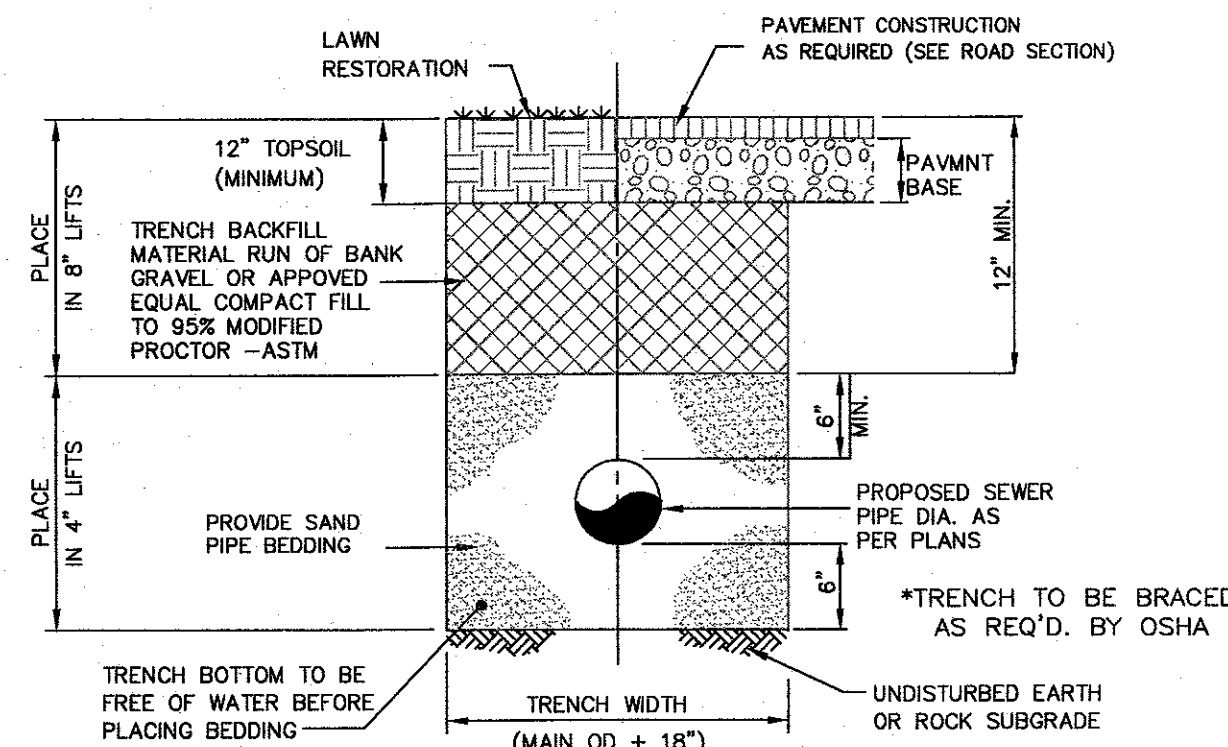
3 TYPICAL UTILITY LINE CROSSING DETAIL
NOT TO SCALE



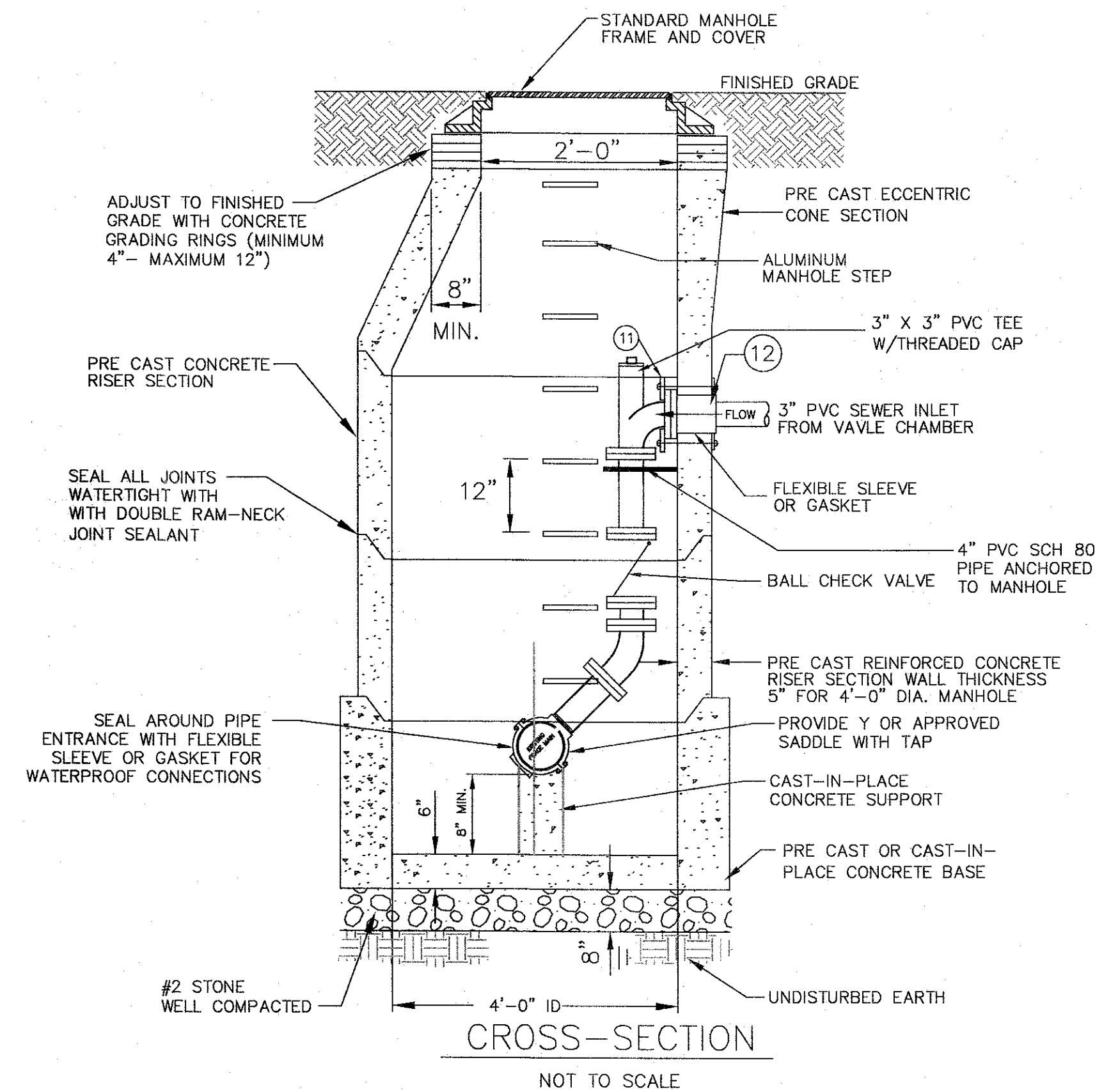
5 SEWER MANHOLE W/ FORCE MAIN CONNECTION DETAIL
NOT TO SCALE



2 TYPICAL FORCE MAIN TRENCH DETAIL
NOT TO SCALE



4 TYPICAL SEWER TRENCH DETAIL
NOT TO SCALE



5 SEWER MANHOLE W/ FORCE MAIN CONNECTION DETAIL
NOT TO SCALE

Sanitary Sewer Notes and Specifications

General Provisions:

- Gravity sewer pipes shall be PVC SDR 35 with ring-tight joints in compliance with ASTM D-3212.
- Sewer mains in relation to water mains: where possible, sewers shall be laid at least 10 (ten) feet horizontally from any existing or proposed water main. Vertical separation shall be maintained to provide 18 (eighteen) inches between top of sewer invert of the water main at utility crossings. When not possible to obtain the proper vertical separation, SDR-26 PVC pipe shall be used 10 (ten) feet on each side of the water main being crossed.
- No roof, foundation or storm drains may discharge into the sewage disposal system.
- All concrete tanks, manholes and chambers etc. shall be pre cast concrete to the specifications and dimensions shown hereon. Frames and covers shall be gray iron or ductile iron. Gray iron shall conform with ASTM A 48, Class 30B and ductile iron shall conform with ASTM A 536 and be of a grade appropriate to its intended use to the dimensions and specifications as shown hereon. Any structures subject to vehicle loads shall be able to withstand an H20 loading. Shop drawings shall be submitted to the design engineer for approval prior to construction.

Gravity Sewer System Testing:

- Contractor shall inspect and test the sewer installations as required by the authority having jurisdiction when work is ready for testing. After all tests have been performed, evidence of compliance shall be forwarded to owner/engineer and the authority having jurisdiction prior to acceptance.
- The contractor shall test and inspect for alignment and infiltration and exfiltration of all sanitary sewers. Infiltration or exfiltration of the sanitary sewer system shall not exceed 0.60 gal/inch of internal pipe diameter per 100' of pipeline per hour with a maximum hydrostatic head at the centerline of the pipe of 25 ft, or as required by the authority having jurisdiction.
- Infiltration leakage tests shall be run on each single manhole-to-manhole section, or reach, independently of all other manhole-to-manhole sections. A pipeline section under test shall include all pipe and fittings between the two man-holes plus the upstream manhole.
- Each manhole-to-manhole section shall be rejected or accepted based only on results of its own independent section test and not on results of any one test run simultaneously over more than one consecutive manhole-to-manhole section. The only exception allowed, accepting several consecutive manhole-to-manhole sections based on one combined infiltration test indicating zero infiltration.
- Infiltration tests shall be made by installing a flow measuring device in the downstream manhole of section being tested. Test duration shall be 24 hrs, or for shorter period, provided a steady state flow condition has been achieved in the test period, and results projected to a 24 hr period.
- Exfiltration tests shall be run on each single manhole-to-manhole section, or reach, independently of all other manhole-to-manhole sections. A pipeline section under test shall include all pipe and fittings between the two man-holes plus the upstream manhole.
- Exfiltration tests shall be made by measuring the drop in water elevation in the upstream manhole 24 hrs after initial water level is recorded. Initial water level in upstream manhole shall be 2 feet higher than either the top of pipe or groundwater elevation at the downstream manhole. Any manhole-to-manhole section undergoing an exfiltration test must have the next adjacent sections, both upstream and downstream, dry and not under test.
- Low pressure air testing may be allowed in lieu of exfiltration tests only. When so allowed, test shall be performed under direction of engineer according to ASTM F1417. An air test shall not be run until section of line to be tested has been cleaned of all foreign material by flushing and has been visually inspected.
- Sewers shall be laid with straight alignment between manholes. Straight alignment shall be checked either using a laser beam or lamping. Testing shall comply with requirements of the authority having jurisdiction.
- Manholes, which cannot be properly air tested, should be visually inspected and leakage-tested using internal or external hydrostatic pressure. Leakage testing shall comply with requirements of the authority having jurisdiction.
- In areas where conventional testing is impractical (i.e. areas designated by Engineer where existing services are tied into new line immediately and any blockage could result in health problems) no lines shall be backfilled until each pipe section and connection is inspected and approved.
- If the allowable rate of infiltration, exfiltration, or air leakage is exceeded, the contractor shall locate points of excessive leakage and shall promptly correct, repair, and bring system up to the standard. Costs of all such repairs and corrective measures, including costs of repeated tests, shall be born by contractor. The sewer line section (including manholes and building services) under test shall not be accepted until these test criteria are met.

MAP REVISION DATES

DATE	REVISION	BY

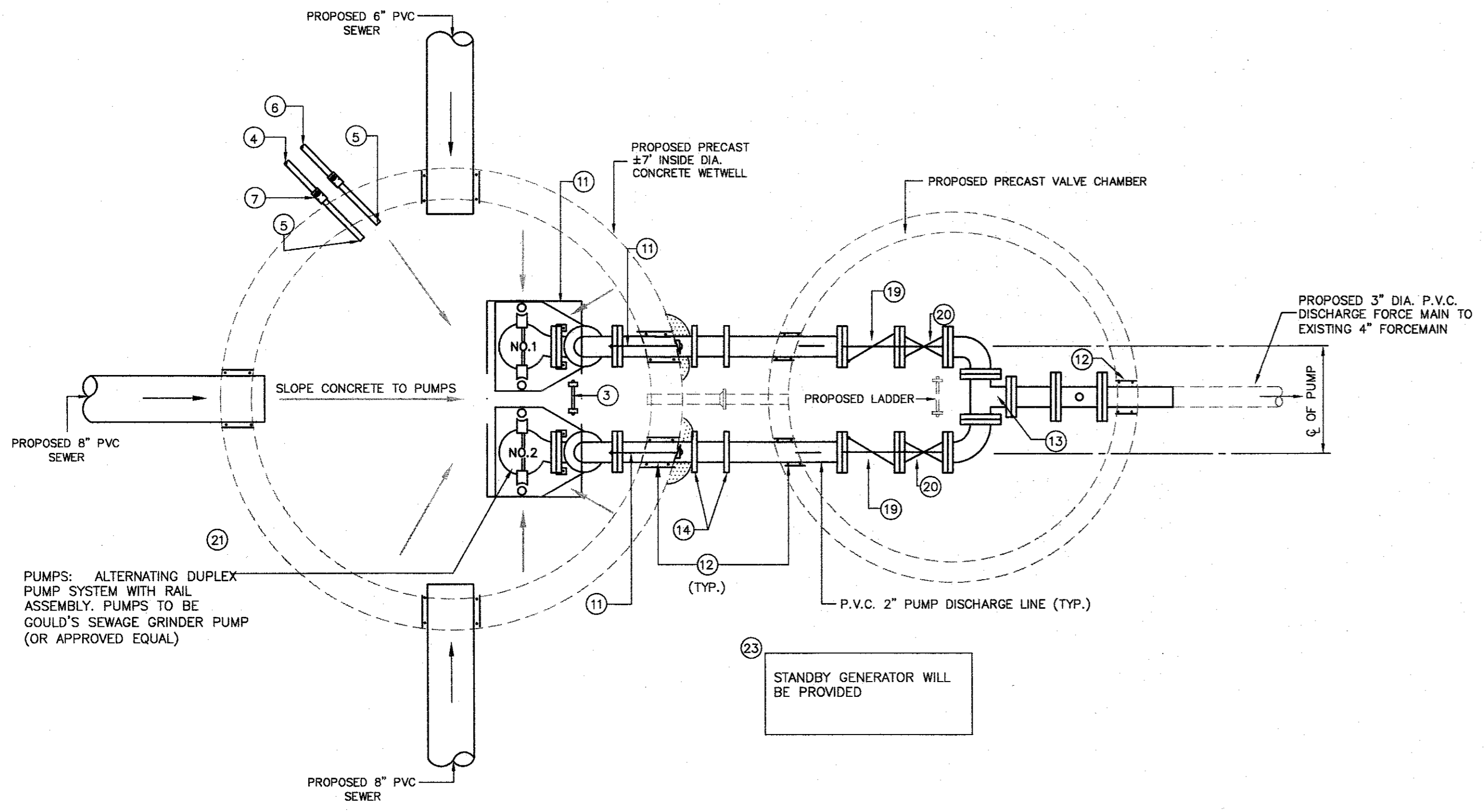
SEWER DETAILS FOR SENIOR HOUSING AT 21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016

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PLAN OF PUMPING STATION AND VALVE CHAMBER UPGRADE
NOT TO SCALE

PROPOSED KEY

1. STAINLESS STEEL LIFTING CHAIN
2. STAINLESS STEEL PUMP GUIDE RAILS
3. ALUMINUM LADDER WITH RUNGS AT 12" O.C. WITH RETRACTABLE 1" O.D. ALUMINUM EXTENSION TUBES FOR HANDRAIL (LOCATE TO SUIT CONDITIONS)
4. PUMP ELECTRICAL SERVICE, (UNDERGROUND CONDUIT) TO REMOTE MOUNTED CONTROL PANEL
5. SEAL WITH NON-SHRINK GROUT SEE GENERAL NOTE #3.
6. FLOAT ELECTRICAL SERVICE (RIGID CONDUIT) TO REMOTE MOUNTED CONTROL PANEL
7. EXPLOSION-PROOF SEAL (TYP. 2)
8. SEALED MERCURY SWITCH AND WATERPROOF CABLE ASSEMBLY (FLOAT SWITCHES)
9. STAINLESS STEEL BRACKET WITH ADJUSTABLE CABLE CONNECTORS (ACCESSIBLE THROUGH ACCESS HATCH)
10. CONCRETE PIPE SUPPORT (WHERE REQUIRED)
11. RESTRAINED CONNECTION: STAINLESS STEEL 1/2" TIE ROD PLATES, 2-3/4" TIE RODS, BOLTS, WASHERS, AND 3/8"x4" SQUARE BACKING PLATE WITH GROUT COVER
12. COMPRESSION GASKET OR LINK-SEAL WITH GROUT COVER
13. SCH 80 TEE
14. COMPRESSION COUPLING
15. PVC TEE WITH THREADED REDUCER BUSHING
16. PRESSURE GAUGE ASSEMBLY WITH DIAPHRAGM SEAL AND ISOLATION VALVE
17. SCH 80 PVC TO SDR 26 PVC TRANSITION COUPLING
18. CONCENTRIC REDUCER (IF REQUIRED)
19. BALL CHECK VALVE
20. TRUE UNION BALL VALVE
21. ALTERNATING DUPLEX PUMP
22. DUPLEX CONTROL PANEL
23. OPTIONAL STANDBY GENERATOR
24. OPTIONAL AUTOMATIC GENERATOR TRANSFER SWITCH

GENERAL NOTES

1. NO ELECTRICAL SPLICES, JUNCTION BOXES, OR CONNECTIONS OF ANY KIND SHALL BE IN THE PUMP CHAMBER.
2. PUMP CONTROLS SHALL BE WIRED INTRINSICALLY SAFE.
3. JUNCTION BOXES SHALL BE ACCESSIBLE WITHOUT NEED FOR ENTERING WETWELL. CONTRACTOR HAS THE OPTION OF PROVIDING PUMPING STATION WITH NEMA 4X JUNCTION BOX AND APPROPRIATE GAS SEAL-OFF FITTINGS CAST INTO TOP SLAB.
4. PUMP CONTROL PANEL TO BE PEDESTAL MOUNTED. ALL CONDUIT AND CONDUCTORS FOR BOTH POWER AND CONTROL TO BE SIZED BY BUILDING DESIGNER. CONTRACTOR TO PROVIDE LOCAL DISCONNECTS FOR THE PUMPS.
5. THE PUMP STATION SHALL HAVE AN ALARM SYSTEM WITH TELEMETRY THAT REPORTS TO THE HOTEL OFFICE WHICH WILL BE MANNED 24 HOURS A DAY AT THE HOTEL.

DESIGN DATA

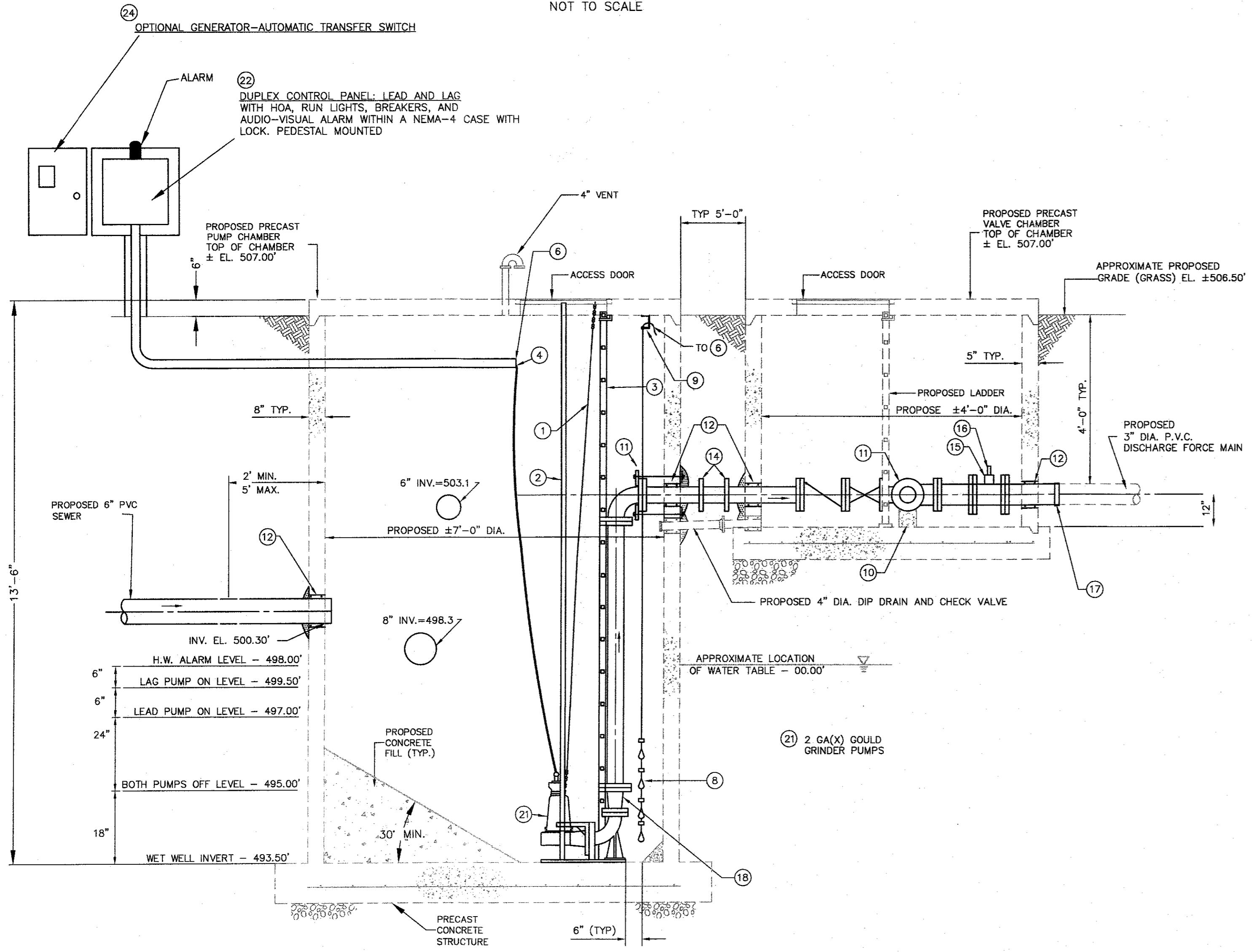
AVERAGE DAILY FLOW = 11,220 = G.P.D.
 PEAK FLOW = 10 X ADF = 78 gpm
 TOTAL DYNAMIC HEAD = 60 gpm
 PUMP CYCLE VOLUME = 576 gallons
 PUMP CYCLE PER DAY = 19

UTILITY CONSTRUCTION AND TESTING SPECIFICATIONS:

- General Provisions:**
1. All construction activities shall be in compliance with municipal, county state and federal regulations.
 2. The protection of adjacent properties or areas on site that are not to be disturbed during construction, shall be the responsibility of the contractor.
- Excavation:**
1. Excavation shall be carried to the lines, grades and slopes shown on the approved plans.
 2. Where unstable or unsuitable material is encountered at the prescribed bottom grade of the trenches it shall be removed.
- Bedding:**
1. Selected bedding shall be provided for the construction of pipe foundations at those locations where the foundations or excavated material, or any portion thereof deemed to be unsuitable for supporting the pipe or structure, or for back filling the cover portion of the trenches to a level one foot above the pipe, or where excavated material consist of a predominance of large stone, boulders or rock which is not suitable for placing in the trench. Certified sieve analysis shall be submitted from the supplier for the engineer's review prior to use.
- Back Filling:**
1. All back fill material shall be placed in layers not exceeding twelve (12) inches in depth, (loose measure), and shall be thoroughly tamped and compacted to a minimum density of 95% standard AASHTO-T99 (ASTM-D698, as amended) compaction test. Compacting equipment shall be of a suitable type for the various back filling operations.
- Obstructions:**
1. Where underground or overhead obstructions are encountered in the work, the contractor shall assume all costs for direct or indirect injury to them. Any valve box, valve pit, water service, water main, catch basin, manhole etc. whether or not shown on the drawings shall be protected from damage. The contractor shall have all utilities identified and located prior to any construction.
- Sanitary Sewers:**
1. Gravity sewer pipes shall be 8" 6" or 4" PVC SDR 35 with ring-tight joints in compliance with ASTM D-3212.
 2. Manholes shall be pre cast concrete. Manhole is to be infiltration/exfiltration tested in accordance with NYSDEC design standards for Wastewater Treatment Works 1988.
- Procedure:**
- Fill manhole with water. Let sit for 24 hours. Maximum allowable rate of infiltration/exfiltration not to exceed 100 gallons per inch diameter per mile per day.
3. 10 - foot horizontal and 2 - foot vertical distance shall be maintained between all water and sewer lines.
 4. No roof or foundation drains may discharge into the sewage disposal system
 5. Sewer main is to be tested in accordance with ASTM F 1417-92 (standard test method for installation acceptance of plastic gravity sewer lines using low-pressure air)
- Procedure:**
- 5.1 Clean section of sewer line to be tested by flushing or other means prior to conducting the low pressure air test. This cleaning serves to eliminate debris and produce the most consistent results.
 - 5.2 Isolate the section of sewer line to be tested by inflatable stoppers or other suitable test plugs.
 - 5.3 Plug or cap the ends of all branches, laterals, tees, wyes, and stubs to be included in the test to prevent air leakage. All plugs and caps shall be securely braced to prevent blowout. One of the plugs or caps should have an inlet tap, or other provision for connecting a hose to a portable air control source.
 - 5.4 Connect the air hose to the inlet tap and portable air control source. The air equipment shall consist of necessary valves and pressure gauges to control an oil-free air source and the rate at which air flows into the test section to enable monitoring of the air pressure within the test section.
 - 5.5 Add air slowly to the test section until the pressure inside the pipe reaches 4.0 psig.
 - 5.6 After the pressure of 4.0 psig is obtained, regulate the air supply so that the pressure is maintained between 3.5 and 4.0 psig for at least 2 min. Depending on air/ground temperature conditions, the air temperature should stabilize in equilibrium with the temperature of the pipe walls. The pressure will normally drop slightly until equilibrium is obtained; however, a minimum of 3.5 psig is required.
 - 5.7 Determine the rate of air loss by either the constant pressure method or the time-pressure drop method (see ASTM F 1417-92 sections 8.2.1 and 8.2.2 for procedures)
 - 5.8 Upon completion of the test, open the bleeder valve and allow all air to escape. Plugs shall not be removed until all air pressure in the test section has been reduced to atmospheric pressure.
 6. Sewer shall be tested with mandrel 95% of pipe diameter for deflection and lamp tested.
 7. Force mains shall be tested using ASTM F 2164
- Force main Test Procedure:**
1. Flush and purge all air from the piping to be tested.
 2. Close off by valves or other method the piping to be tested.
 3. Slowly, add water with a positive displacement pump to raise the system pressure to the maximum determined by the authority having jurisdiction. (The maximum pressure is 1.5 times the design working pressure less the elevation hydrostatic head. Typical design (maximum operating) pressures: for SDR-9 is 200 psi, for SDR-11 is 160 psi, and SDR-13.5 is 128 psi, and is to be reduced for higher temperatures.)
 4. Allow the test section of piping and test liquid to equalize in temperature.
 5. Add make up water as necessary for four (4) hours to maintain test pressure.
 6. Reduce pressure by ten (10 psi), by letting water out and then closing the system.
 7. Monitor for one (1) hour, do not increase pressure or add water.
 8. Pass/Fail Criteria: If no leakage is visually observed and the pressure remains steady (within 5% of the pressure at item # 6) then a passing test is indicated.

TOWN SEWER SYSTEM NOTES

1. Construction of sanitary sewer facilities and connection to the Town of Newburgh sanitary sewer system requires a permit from the Town of Newburgh Sewer Department. All construction shall conform to the requirements of the NYSDEC and the Town of Newburgh.
2. All sewer pipe installation shall be subject to inspection by the Town of Newburgh Sewer Department. The Contractor shall be responsible for coordinating all inspections as required with the Town of Newburgh Sewer Department.
3. All gravity sanitary sewer service lines shall be 4 inches in diameter or larger and shall be SDR-35 PVC pipe conforming to ASTM D-3034-89. Joints shall be push-on with elastomeric ring gasket conforming ASTM D-3212. Fittings shall be as manufactured by the pipe supplier or equal and shall have a bell and spigot configuration compatible with the pipe.
4. The sewer main shall be tested in accordance with Town of Newburgh requirements. All testing shall be coordinated with the Town of Newburgh Sewer Department.
5. The final layout of the proposed water and/or sewer connection, including all materials, size and location of service and all appurtenances, is subject to the review and approval of the Town of Newburgh Water and/or Sewer Department. No permits shall be issued for a water and/or sewer connection until a final layout is approved by the respective Department.



CROSS-SECTION OF PUMPING STATION AND VALVE CHAMBER
NOT TO SCALE

1 PROPOSED DUPLEX PUMP STATION
NOT TO SCALE

MAP REVISION DATES		
DATE	REVISION	BY
03-27-2017	ADDED TOWN OF NEWBURGH SEWER NOTES, CORRECTED PIPE TYPE PER NEWBURGH TOWN NOTE	SL
04-04-2017	CORRECTED VARIOUS DESCRIPTIONS AND MATH, SEWER PIPE SIZE FROM 6" TO 8", LOCATED PIPES IN CROSS-SECTION OF PUMP STATION AND VALVE CHAMBER	SL

**SEWER DETAILS
CONTINUED**

FOR SENIOR HOUSING AT
21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016

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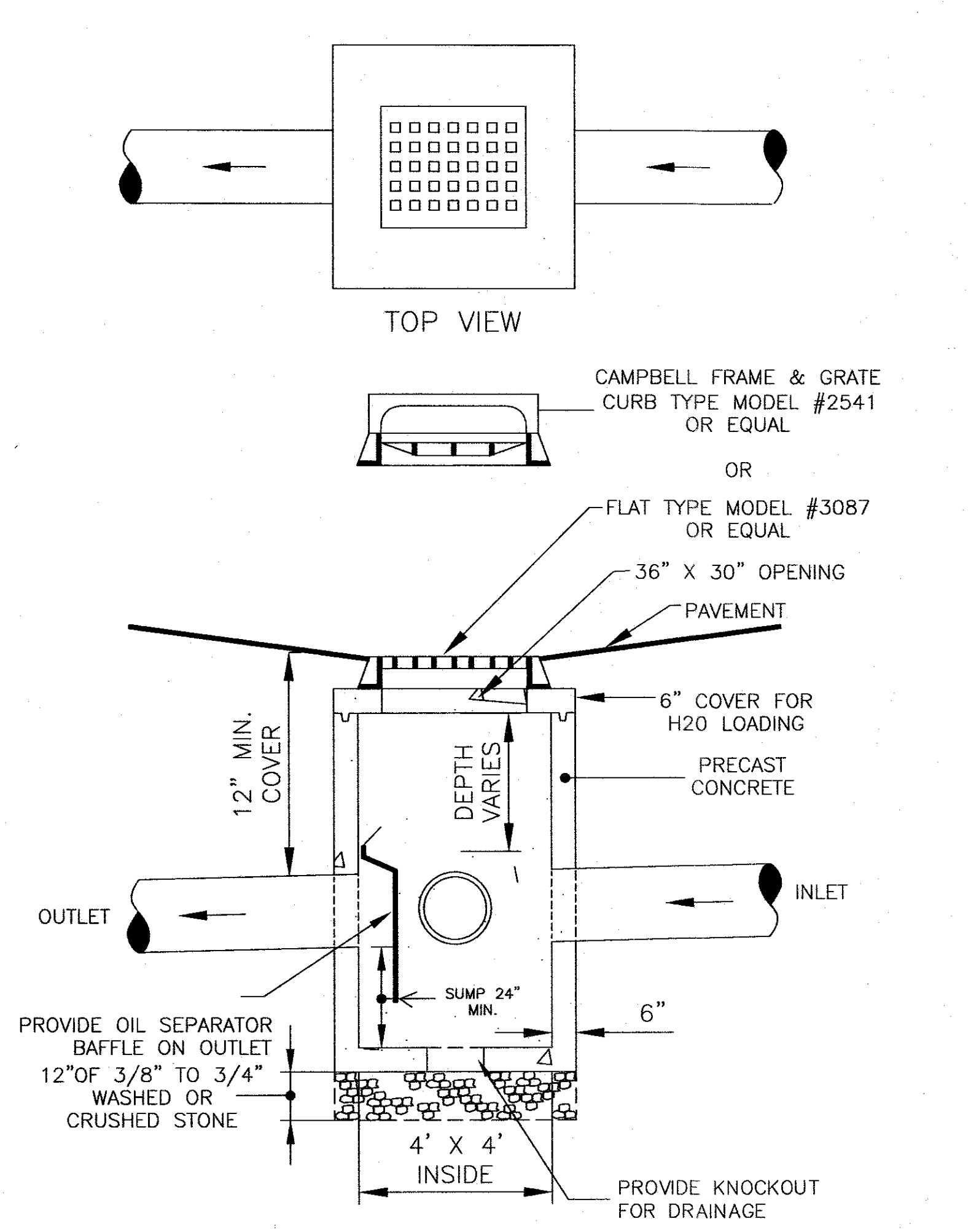
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D5
SHEET 16 OF 17

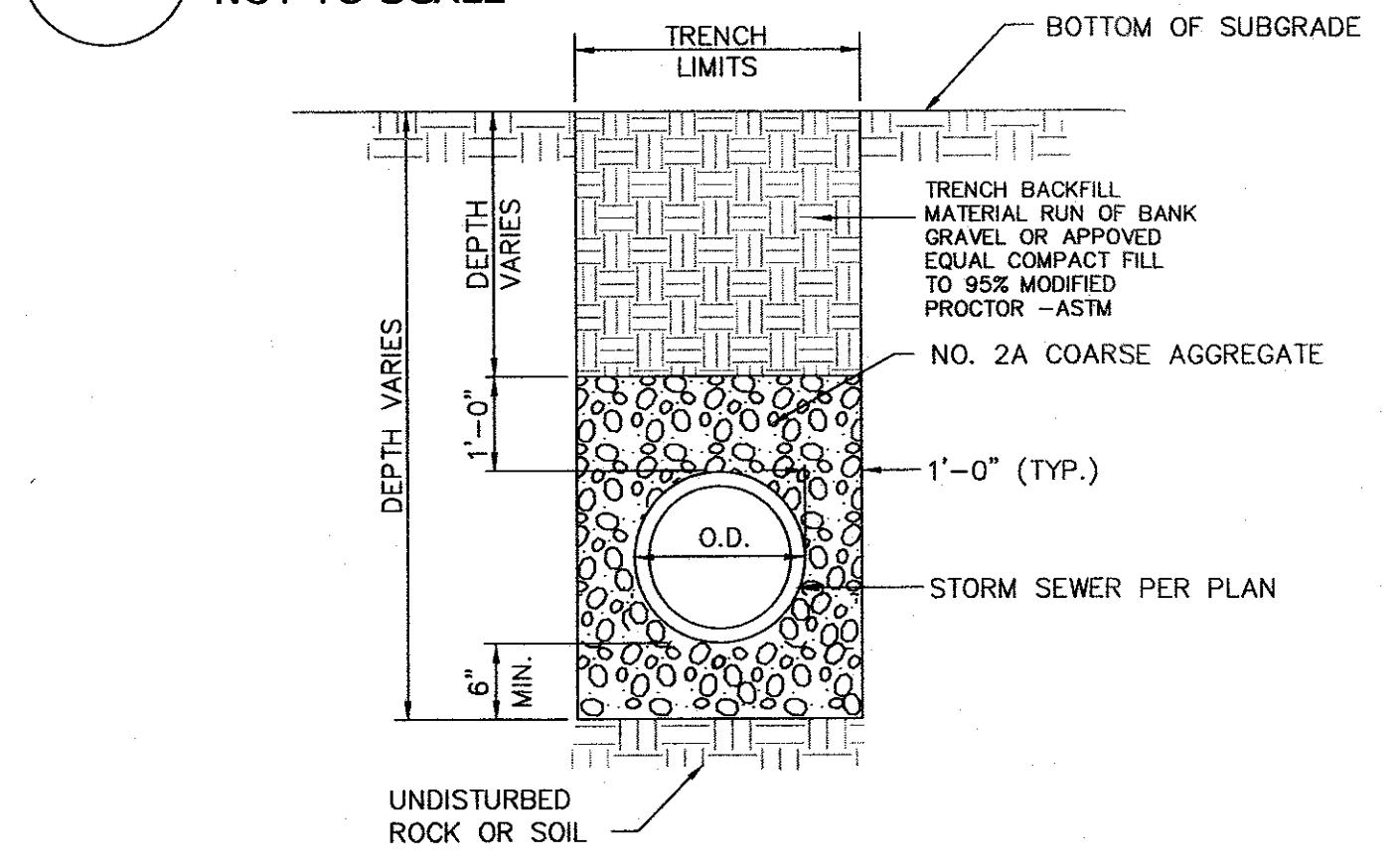
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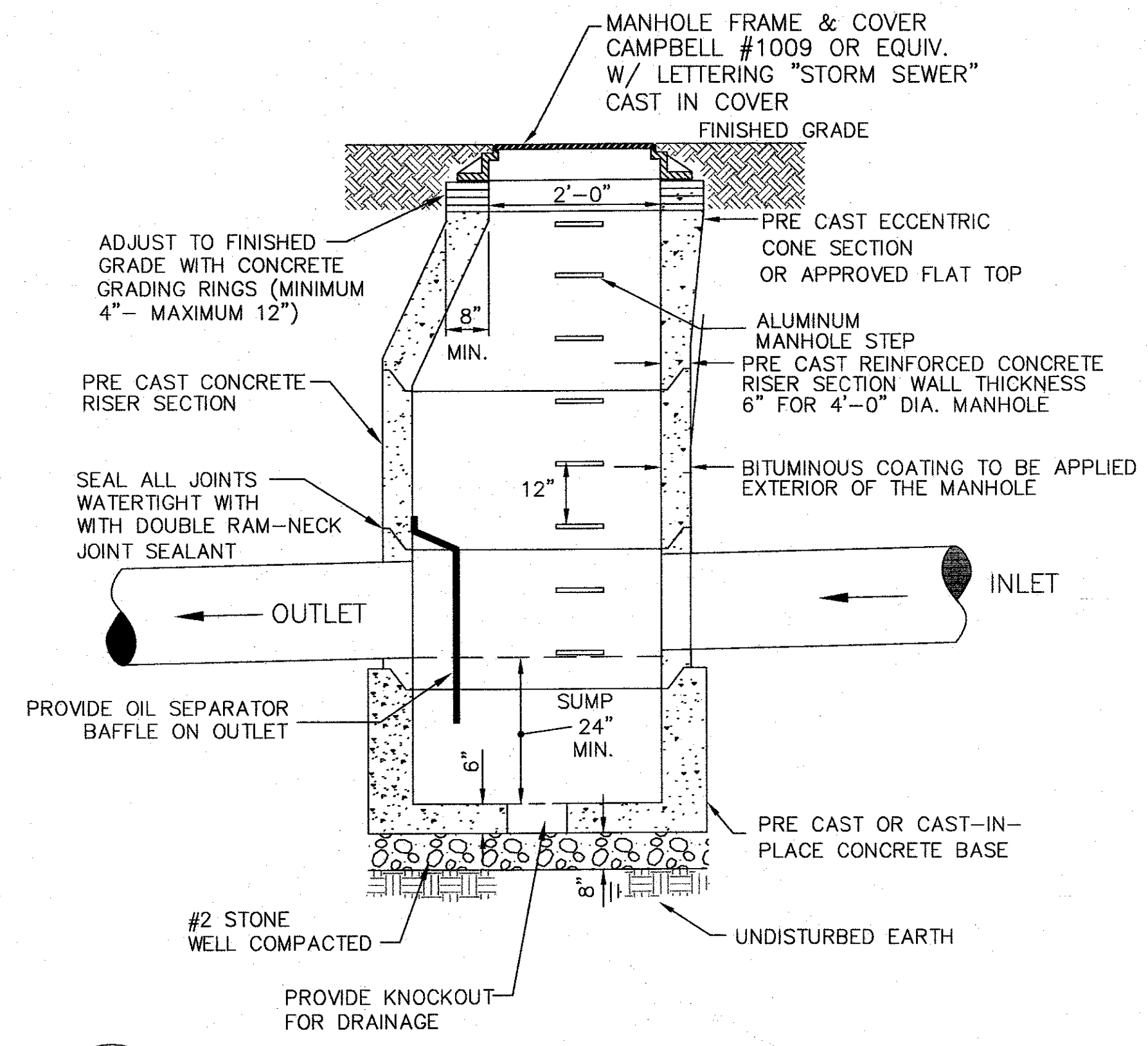
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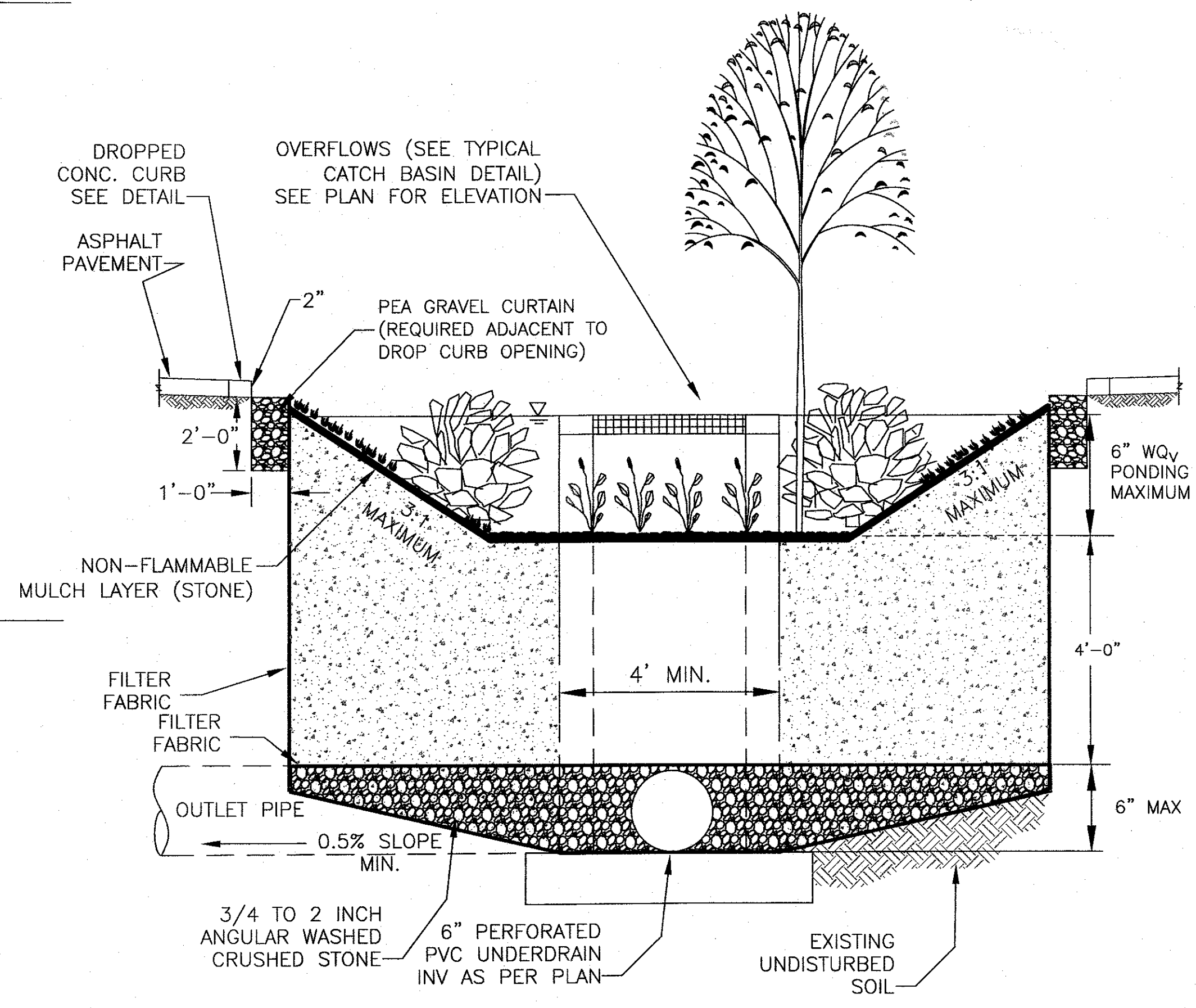
1 TYPICAL CATCH BASIN DETAIL
NOT TO SCALE



2 TYPICAL DRAINAGE TRENCH DETAIL
NOT TO SCALE



3 TYPICAL STORMWATER MANHOLE (4' DIA.)
NOT TO SCALE



4 TYPICAL BIORETENTION ISLAND CROSS-SECTION
NOT TO SCALE

General Utility Notes and Specifications:

- General Provisions:**
- All construction activities shall be in compliance with municipal, county state and federal regulations.
 - The protection of adjacent properties or areas on site that are not to be disturbed during construction, shall be the responsibility of the contractor.
 - Any conditions encountered in the field differing from those shown hereon, shall be reported to the design engineer before construction is to proceed.
 - Exploratory excavations shall be performed as needed at all utility connection locations by the contractor to verify existing conditions prior to work. Before connecting to existing utilities, verify existing utility inverts and notify the engineer if any deviation from the plan is required.
 - Where underground or overhead obstructions are encountered in the work, the contractor shall assume all costs for direct or indirect injury to them. Any valve box, valve pit, water service, water main, catch basin, manhole etc. whether or not shown on the drawings shall be protected from damage.
 - The contractor shall maintain service for all existing utilities until no longer necessary.
 - All trenching and shoring shall adhere to OSHA guidelines.
 - Contractor shall comply with all the requirements of the SPDES General Permit for Stormwater Discharges from Construction Activity - GP-0-10-001. A current copy of the Stormwater Pollution Prevention Plan (SWPPP) shall be kept on site at all times. Contractor is responsible for conducting weekly inspections (must be qualified by NYSDEC) or retaining a qualified inspector such as the design engineer to perform such inspections.

- Excavation and Earthwork:**
- Prior to site disturbance the contractor shall install required erosion & sediment control measures.
 - Strip all topsoil prior to commencing earthwork operations. Topsoil may be stored and reused in lawn and planting areas only.
 - Excavation shall be carried to the lines, grades and slopes shown on the approved plans. All final earthwork shall be smoothly and evenly blended into existing conditions.
 - Remove all vegetation, trees, stumps, grasses, organic soils, debris and deleterious materials from excavated soils to be reused as fill onsite.
 - Where unstable or unsuitable material is encountered at the prescribed bottom grade of the trenches it shall be removed.
 - Contractor shall be responsible for dewatering utility trenches and excavations and for the maintenance of surface drainage during the course of the work.
 - After final grading the contractor shall reapply stockpiled top soil on all lawn and planting areas. Topsoil shall be evenly spread a minimum of 4 (four) inches over all planting areas seeded and mulched in lawn areas or planted as per landscaping plan in planting beds. The contractor shall restore lawns, driveways and other disturbed areas to at least as good a condition as before being disturbed.

- Utility Bedding and Backfill:**
- Selected bedding (as specified on the utility typical trench sections hereon) shall be provided for the construction of pipe foundations at those locations where the foundations or excavated material, or any portion thereof deemed to be unsuitable for supporting the pipe or structure, or for back filling the cover portion of the trenches to a level one foot above the pipe, or where excavated material consist of a predominance of large stone, boulders or rock which is not suitable for placing in the trench. Certified sieve analysis shall be submitted from the supplier for the engineer's review prior to use.
 - All suitable back fill material shall be placed in layers not exceeding twelve (12) inches in depth, (loose measure), and shall be thoroughly tamped and compacted to a minimum density of 95% standard AASHTO-T99 (ASTM-D698, as amended) compacting test. Compacting equipment shall be of a suitable type for the various back filling operations.

- Drainage:**
- All storm sewer pipe shall be smooth interior HDPE pipe unless noted otherwise.
 - HDPE end sections shall be provided on all drainage pipe inlets or outlets not connected to catch basins or other drainage structures. All outlets shall also be stabilized with rip-rap as per plans.
 - All concrete chambers shall be pre cast concrete to the specifications and dimensions shown hereon. Frames and grates shall be gray iron or ductile iron. Gray iron shall conform with ASTM A 48, Class 30s and ductile iron shall conform with ASTM A 536 and be of a grade appropriate to its intended use to the dimensions and specifications as shown hereon. Any structures subject to vehicle loads shall be able to withstand an H20 loading. Shop drawings shall be submitted to the design engineer for approval prior to construction.
 - The gutters and ditches shall be kept open at all times for surface drainage. No damming or ponding of water, in gutters or other waterways will be permitted except where the engineer shall consider it necessary.
 - The transport of soils to the drainage system shall be avoided during and after construction.
 - All exposed soils shall be stabilized with vegetation, stone or as directed by the engineer.

Site Management Notes:

- All waste generated from the hotel will be placed in a dumpster located in an enclosure at the southeast corner of the site. In addition, separate containers will be provided for recycling cardboard, paper, plastics, glass and metal. Pickup for the waste and recyclables will be twice a week. A 9'-4" high concrete wall with a stone veneer matching the hotel exterior will be provided to screen the receptacles. The enclosure will also feature a 10 foot by 10 foot storage room, adjacent to the trash and recycling storage, to store exterior maintenance equipment. Access to the dumpster and recycling receptacles will be provided through a solid steel gate and a solid steel door will provide access to the storage room. A 30 foot long by 10 foot wide concrete pad will be provided in front of the gate to provide a durable loading area during pickups. As part of the daily maintenance the trash/recycling enclosure will be cleaned and washed every day. In addition to cleaning the enclosure the parking lot and grounds will be inspected and cleaned of any trash on a daily basis.
- All landscaping will be irrigated and daily maintenance of the grounds such as cutting of lawns, garden maintenance etc. will be performed weekly during the growing season.
- During the winter months maintenance will consist of snow and ice removal as required. The parking areas will be swept every spring to remove any sand accumulated during the winter months also the stormwater system will be inspected.
- Only natural herbicides and pesticides will be used if necessary in the management of the sites landscaping.

BIORETENTION SOIL CHARACTERISTICS

Table H.2 Planting Soil Characteristics

Parameter	Value
PH range	5.2 to 7.00
Organic matter	1.5 to 4.0%
Magnesium	35 lbs. per acre, minimum
Phosphorus (P ₂ O ₅)	75 lbs. per acre, minimum
Potassium (K ₂ O)	85 lbs. per acre, minimum
Soluble salts	• +500 ppm
Clay	10 to 25%
Silt	30 to 55%
Sand	35 to 60%

MAP REVISION DATES		
DATE	REVISION	BY
03-27-2017	ADDED BIO SOIL CHARACTERISTICS CHART	SL

DRAINAGE DETAILS
FOR SENIOR HOUSING AT
21 LAKESIDE PROPERTIES INC.

SITUATE - LAKESIDE ROAD
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK
FEBRUARY 8, 2016

MEDENBACH & EGGERS
CIVIL ENGINEERING & LAND SURVEYING, P.C.
STONE RIDGE, NEW YORK (845) 687-0047

Barry Medenbach
BARRY MEDENBACH, P.E.
NEW YORK LIC. NO. 60142

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SHEET 17 OF 17