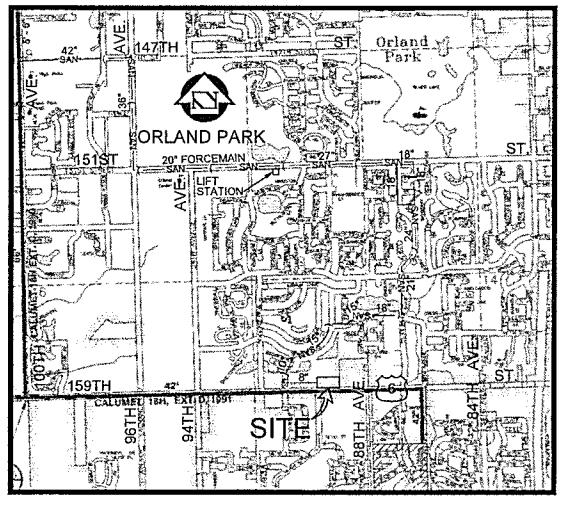
VOLKSWAGEN OF ORLAND PARK

8920 W. 159th Street
Orland Park, IL 60462

DETAIL BUILDING SITE IMPROVEMENT PLANS

GENERAL NOTES

1. The Village of Orland Park, Development Services Department (Telephone 1-708-403-5500), MWRD Field Office Phone Number (Telephone 1-708-588-4055), and Joseph A. Schudt & Associates (Telephone 1-708-720-1000) must be notified 2 working days prior to commencement of work.
2. Elevation is U.S.G.S. Datum. (NAVD 88)
3. All floor drains shall discharge to the sanitary sewer.
4. All downspouts and footing drains shall discharge to the storm sewer.
5. All sanitary sewer construction requires stone bedding 1/4 inch to 1 inch in size, with a minimum thickness equal to 1/4 the outside diameter of the sewer pipe, but not less than 4 inches, nor greater than eight inches. Bedding material shall be CA-11 and shall be extended at least 12 inches above top of pipe when using PVC pipe.
6. "Band Seal" or similar flexible-type couplings shall be used for the connection of sewer pipe of dissimilar materials.
7. When connecting to an existing sewer main by means other than an existing wye, tee, or an existing manhole, one of the following methods shall be used:
   a. Circular saw-cut of sewer main by proper tools ("Sewer Tap" machine or similar) and proper installation of hub-wye saddle or hub-tee saddle.
   b. Remove an entire section of pipe (breaking only the top of the bell) and replace with a wye or tee branch section.
   c. With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using "Band-Seal" or similar couplings to hold it firmly in place.
8. Wherever a sewer crosses under a watermain, the minimum vertical distance from the top of the sewer to the watermain shall be 18 inches. Furthermore, a minimum horizontal distance of 10 feet between storm and/or sanitary and watermains shall be maintained unless: the sewer is laid in a separate trench, keeping a minimum 18 inch vertical separation; or the sewer is laid in the same trench with the watermain located at the opposite side on a bench of undisturbed earth, keeping a minimum 18 inch vertical separation. If either the vertical or horizontal distances described above cannot be maintained, or the sewer crosses above the watermain, then, for a distance of 10 feet on either side of the watermain, the sewer pipe shall be PVC pressure pipe material or the watermain shall be constructed in a watertight casing.
9. Contractor shall bend watermain pipe uniformly under sewers without using fittings providing that joint deflection does not exceed 5 degrees per joint for pipe under 12 inches in size and 3 degrees per joint for pipe 14 inches and over in size. All crossing (including services) shall have a minimum of 18 inches of clearance and should extend 10 feet each side of the center of the crossing.
10. All sanitary manholes shall have a minimum inside diameter of 48 inches. Manhole steps shall be 16" min. wide plastic w/continuous 1/2 steel reinforcement, M.A. Industries or equal.
11. All sanitary sewer, storm sewer, and water system construction shall conform to the "Standard Specifications for Water and Sewer Main Construction in Illinois", current edition.
12. All paving and related improvements shall be constructed in accordance with the Illinois Department of Transportation, "Standard Specifications for Road and Bridge Construction in Illinois", current edition.
13. All trenches caused by the construction of sewers, watermains, water service pipes, and in excavation around catch basins, manholes, inlets, and other appurtenances which occur within the limits of, or within 2 feet of existing or proposed pavements, sidewalks, and curb and gutters shall be backfilled with trench backfill. Trench backfill shall be CA-6 material to subgrade and shall be mechanically compacted in 12" lifts.
14. 12", 10" & 8" diameter sanitary sewer pipe and fittings shall be PVC pipe, SDR 26 (ASTM D-3034) with flexible elastomeric (O-ring) gaskets (ASTM D-3212), unless otherwise noted. Where 6" diameter sanitary service crosses below watermain with less than 18 inches of separation, or where indicated elsewhere on plans, 6" service shall be DIP pipe (ANSI 2151) with gasket joints (ANSI 21,11). Sanitary sewers shall be air tested, mandril tested, and televised. Sanitary sewer manholes shall be provided with internal chimney seals (Cretex or equal). All Sanitary Manholes shall be provided with mac wrap at barrel section joints. Sanitary sewer manholes shall be air tested in accordance with ASTM C-1244-93, Standard Test Method for Concrete Sewer Manholes by Negative Air Pressure (Vacuum) Test.
15. Watermain shall be ductile iron, Class 52 (AWWA C-151) with cement lining (AWWA C-104) and hydrocarbon resistant gaskets (AWWA C-110) with brass wedges for electrical continuity. Ductile iron watermain shall be provided with polyethylene encasement (AWWA C-105). All watermain fittings, valves, and hydrants shall have stainless steel bolts and shall be secured using Meg-A-Lug restrained joints. Thrust blocking shall also be provided, with precast blocking permitted. Watermain shall be pressure tested at 150psi for two hours. A leakage test will be performed in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", current edition. A disinfection test shall be completed using an initial chlorine concentration of 50 mg/l and a minimum residual concentration of 25 mg/l after 24 hours. All work shall comply with Village of Orland Park standards.
16. Watermains and lot services shall be a minimum of 5.0 feet below finished ground surface.
17. a. All storm sewer must be reinforced concrete pipe in paved areas.
    b. All reinforced concrete pipe shall be ASTM C76 CL IV.
    c. Sump pump discharge piping shall be PVC Schedule 40.
    d. All flexible storm sewer pipe must be televised for final inspection.
18. Where storm sewers cross over the tops of watermains and are designated as "LHP" type, they shall be reinforced concrete low head pressure pipe (ASTM C-361-76). Alternately, proper watermain protection per note (8.) shall be provided.
19. All bends in the watermain of 10 degrees or greater shall be installed with restrained joints (Meg-A-Lug or equal). Restrained joints (Meg-A-Lug or equal) shall be used within three pipe lengths of a fitting. No thrust blocking is allowed.
20. All rims and inverts of existing sanitary and storm sewer shall be field verified prior to the start of construction, and any discrepancies between the plan and existing elevations shall be reported to the Engineer immediately.
21. All coordinates refer to back of curb, centerline of manhole, pipe, or structure, or as shown.
22. All curb radii refer to back of curb. Lane dimensions refer to face of curb or edge of pavement.
23. The Contractor shall subscribe to all governing regulations and shall obtain all necessary public agency permits.
24. Field check all dimensions, coordinates, and elevations before proceeding with new work. Notify the Engineer of any discrepancies immediately.
25. The Contractor shall provide for the safe and orderly passage of traffic and pedestrians where his operations abut public thoroughfares and adjacent property.
26. Construction access points to the site shall be protected in such a way as to prevent tracking of mud or soil onto public thoroughfares. At the end of each day, the Contractor shall clean up all mud or soil which has been tracked onto public streets or as required by the Village of Orland Park.
27. Street paving and curbs to remain shall be protected from damage and, if damaged, shall be replaced promptly to meet Village of Orland Park Standard Specifications in materials and workmanship.
28. Prior to new work, the Contractor shall verify the location and elevation of existing utility lines and structures to be connected to proposed work. Discrepancies shall be reported to the Engineer immediately.
29. All sediment will be prevented from entering any existing storm drainage systems by the use of hay bales, interceptor dikes or other approved functional methods. The Contractor shall be responsible for removing sediment resulting from this project from storm sewers and drainage structures.
30. All utility connections to existing lines shall be constructed in accordance with the regulations of the utility owner and to the satisfaction of the utility owner.
31. All work shall be in accordance with the specifications for the Village of Orland Park.
32. New watermain valves, including pressure tap valves, adjacent to an existing watermain, and existing watermain valves shall only be operated by the Village of Orland Park, Department of Public Works personnel with a 48-hour notice (Monday-Friday).
33. Any existing utility structures requiring adjustment are to be adjusted (up to 6" total adjustment allowed with a maximum of 2 precast concrete rings) or reconstructed by the contractor to the utility owner's satisfaction. Adjustments or reconstructions not called for on the plans shall be considered incidental to the contract. A total of no more than 6" and no less than 4 inches of adjusting rings shall be provided at all utility structures. Adjusting rings shall be set in a bed of preformed non-hardening mastic (RUB-R-NEK or approved equal). The upper adjusting ring shall be made of recycled rubber (Infra-Riser brand or equal).
34. All connections to existing manholes shall be made by coring the existing manhole using a diamond or carbide tip cutter and installing a press seal PSX or CORE-N-SEAL boot in the cored opening.
35. All storm sewer flared end sections for pipes greater than 12 inch diameter shall be provided with grates per I.D.O.T. standards.
36. Reproduceable "Record" drawings shall be provided by the contractor to the Village of Orland Park and Owner following completion of improvements.
37. Structure lids shall be stamped "VILLAGE OF ORLAND PARK" and "SANITARY", "STORM", or "WATER" for appropriate utilities.
38. Sanitary and Water stubs shall be marked with 4"x 4" wood posts.
39. One lane in each direction shall be open to traffic at all times except between the hours of 9 A.M. to 3 P.M. During this period all work must be performed in accordance with standards 701201, 701206, and 701401.
40. Traffic control standards which shall be included for use during construction are: 702001, 701201, 701206, 701301, 701401, 701501, 701606, and 701701.



VICINITY MAP

(NOT TO SCALE)

NOTE: ALL SANITARY SEWERS FROM SITE TO THE M.W.R.D. INTERCEPTOR ARE OWNED BY THE VILLAGE OF ORLAND PARK.

LEGEND

EXISTING SANITARY MANHOLE	PROPOSED LIGHT
PROPOSED SANITARY MANHOLE	EXISTING CONTOUR LINE
EXISTING SANITARY SEWER	PROPOSED CONTOUR LINE
PROPOSED SANITARY SEWER	EXISTING CURB
EXISTING VALVE IN VAULT	PROPOSED CURB
PROPOSED VALVE IN VAULT	EXISTING CURB TO BE REMOVED
EXISTING VALVE	PROPOSED HUNG CURB
PROPOSED VALVE	EXISTING POWER POLE
EXISTING REDUCER	EXISTING TRANSFORMER
PROPOSED REDUCER	EXISTING ELECTRIC MANHOLE
EXISTING HYDRANT	EXISTING ELECTRIC CABLE
PROPOSED HYDRANT	EXISTING TELEPHONE PEDESTAL
EXISTING WATERMAIN	EXISTING TELEPHONE MANHOLE
PROPOSED WATERMAIN	EXISTING TELEPHONE CABLE
EXISTING STORM MANHOLE	EXISTING TRAFFIC SIGNAL
PROPOSED STORM MANHOLE	EXISTING HAND HOLE
EXISTING CATCH BASIN	EXISTING GAS VALVE
PROPOSED CATCH BASIN	EXISTING GAS MAIN
EXISTING INLET	EXISTING CABLE T.V.
PROPOSED CIRCULAR INLET	EXISTING BORING LOCATION
PROPOSED INLET	EXISTING SIGN
EXISTING STORM SEWER	EXISTING FENCE LINE
PROPOSED STORM SEWER	EXISTING DECIDUOUS TREE
EXISTING CULVERT	EXISTING EVERGREEN
PROPOSED CULVERT	EXISTING BUSH/HEDGE
EXISTING LIGHT	EXISTING WETLAND

CLIENT

The Linden Group Architects
CONTACT: GRANT CURRIER
10100 ORLAND PARKWAY, SUITE 110
ORLAND PARK, IL 60467
PHONE: 708-799-4400
gcurrier@lindengroupinc.com

DUTY TO INDEMNIFY

The Contractor shall defend, indemnify, keep and save harmless the Village, Owner, and Engineer, and their respective board members, representatives, agents, and employees, in both individual and official capacities, against all suits, claims, damages, losses and expenses, including attorney's fees, caused by, growing out of, or incidental to, the performance of the work under the Contract by the Contractor or its subcontractors to the full extent as allowed by the laws of the State of Illinois and not beyond any extent which would render these provisions void or unenforceable. This obligation includes but is not limited to: The Illinois laws regarding structural work (Ill. Rev. Stat. Ch.48, par.60 et seq.). And regarding the protection of adjacent landowners (Ill.Rev. Stat. Ch.17 1/2 par.51 et seq.). In the event of any such injury (including death) or loss or damage, or claims therefore, the Contractor shall give prompt notice to the owner.

Joseph A. Schudt & Associates (184-001172)
9455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065
CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES

ILLINOIS PROFESSIONAL DESIGN FIRM NO. 184-001172

PREPARED AT OR UNDER THE DIRECTION OF:

ILLINOIS PROFESSIONAL ENGINEER NO. 062-043406

D. WARREN OPPERMAN
No. 43406
REGISTERED PROFESSIONAL ENGINEER
ILLINOIS

SIGNED: JAN. 26, 2018

LIC. EXP: 11-30-19

CONTACT JULIE AT 811 OR 800-892-0123
WITH THE FOLLOWING INFORMATION
COUNTY-NAME COOK
CITY / TOWNSHIP ORLAND PARK / ORLAND
SEC & 1/4 SEC No. W 1/2 OF E 1/2 SECTION 15-36-12
Know what's below. Call before you dig. 48 HOURS (2 working days) BEFORE YOU DIG

INDEX

LEGAL DESCRIPTION:

A PORTION OF LOT 1 IN ROESCH PARK SUBDIVISION BEING A SUBDIVISION IN THE WEST 1/2 OF THE EAST 1/2 OF SECTION 15, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

P.I.N. - 27-15-401-015-0000

BENCHMARK:

1. WEST FLANGE BOLT ON FIRE HYDRANT LOCATED IN THE INTERSECTION OF 159TH ST. AND HAVEN AVE. ELEVATION = 720.34 (NAVD 88)

2. FINISH FLOOR ELEVATION AT THE NORTH GARAGE ENTRY DOOR OF EXISTING VOLKSWAGEN DEALERSHIP. ELEVATION= 700.70 (NAVD 88)

No.	Date	By	Description
1	01-26-18	JAR	PER VILLAGE OF ORLAND PARK

REVISIONS

Date: 11-17-17	Drawn: JAR	SHEET 1 OF 7	Project No. 17-053
Design: DWO	Approved: DWO		

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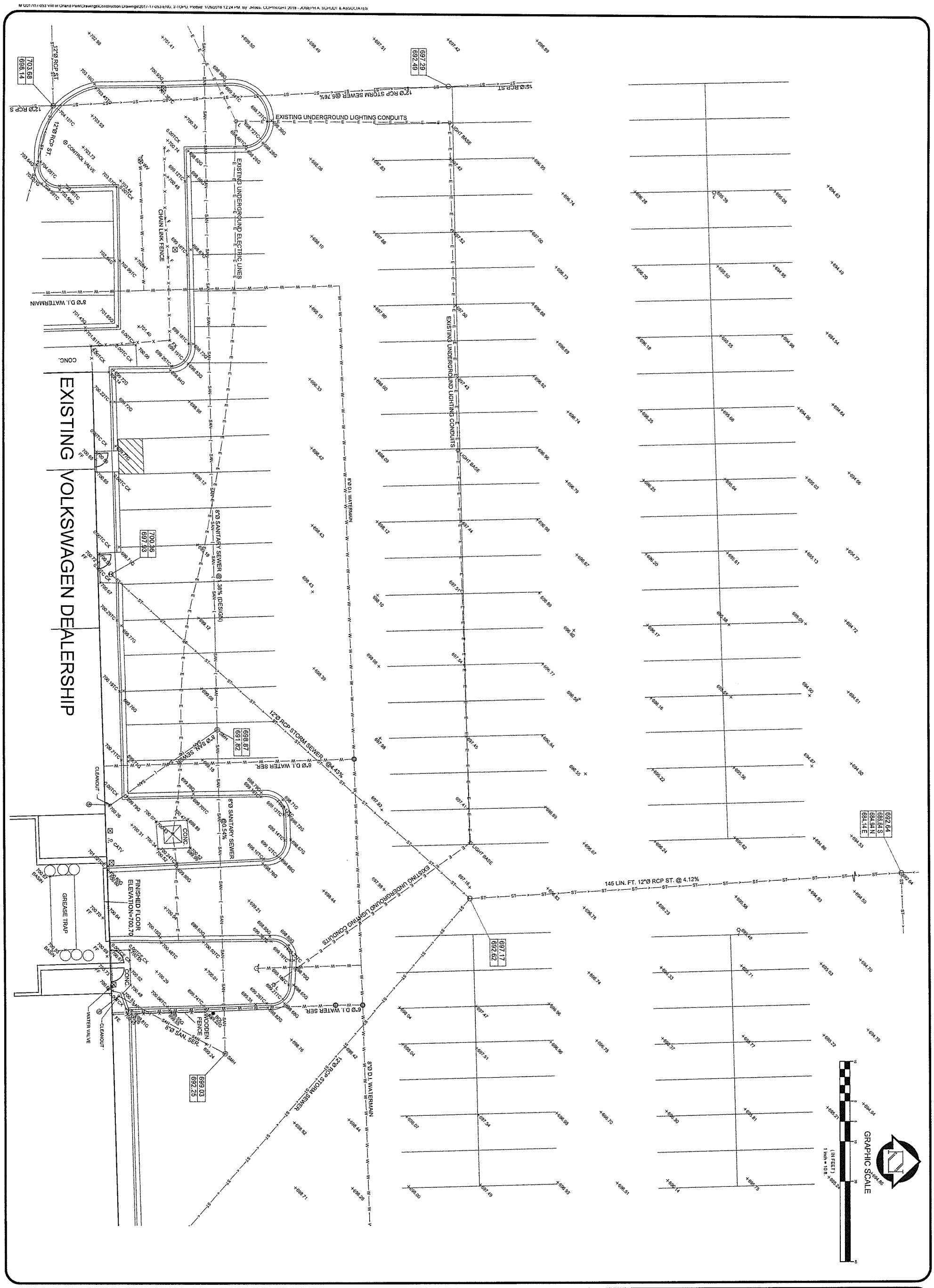

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Drawn:	JAR
Checked:	DWO
Sheet:	2 OF 7
Project No.:	17-053

VOLKSWAGEN OF ORLAND PARK

8920 W. 159th ST., ORLAND PARK, IL

EXISTING SITE TOPOGRAPHY

REVISIONS:

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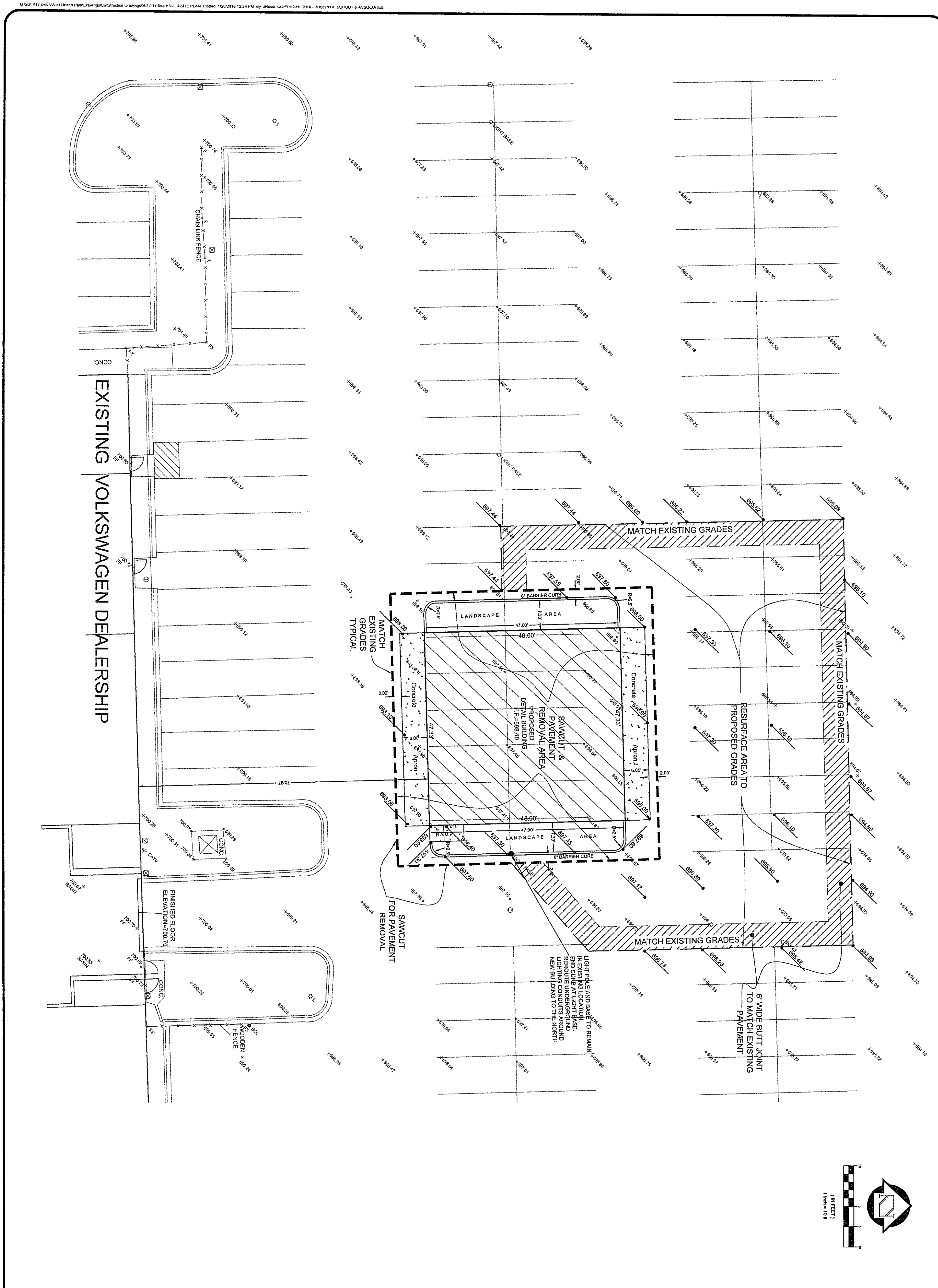

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File Name:	2017-17-053-ENG
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Checked:	DWO
Sheet:	3 OF 7
Project No.:	17-053

VOLKSWAGEN OF ORLAND PARK

8920 W. 159th ST., ORLAND PARK, IL

SITE PLAN & GRADING PLAN

REVISIONS:
REV. 01-26-18

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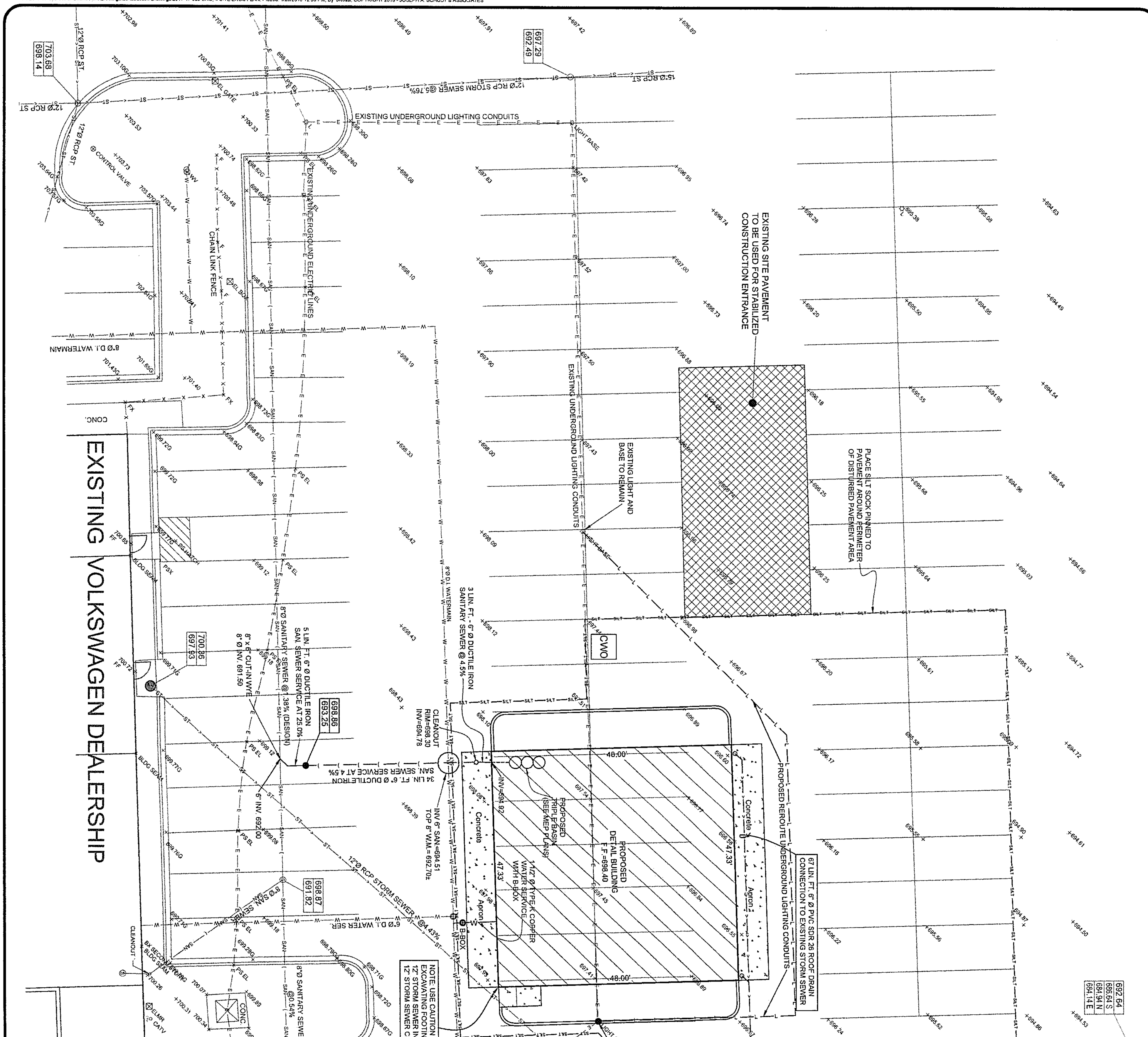

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Scale: 1"= 10'
File Name: 2017-17-053-ENG
Drawn: JAR
Checked: DWO
Sheet: 4 of 7
Project No.: 17-053

VOLKSWAGEN OF ORLAND PARK
8920 W. 159th ST., ORLAND PARK, IL
EROSION CONTROL PLAN & UTILITY PLAN

REVISIONS:
REV. 01-26-18

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STORM WATER POLLUTION PREVENTION PLAN

The following plan is established and incorporated in the project to direct the contractor in the placement of temporary erosion control systems and to provide a storm sewer water pollution prevention plan for compliance under NPDES.

The purpose of this plan is to minimize erosion within the construction site and to limit sediments from leaving the construction site by utilizing proper temporary erosion control systems and providing ground cover within a reasonable amount of time.

Certain erosion control facilities shall be installed by the contractor at the beginning of construction. Other items shall be installed by the contractor as directed by the Engineer on a case by case situation depending on the contractor's sequence of activities, time of year, and expected weather conditions.

The contractor shall install permanent erosion control systems and seeding within a time frame specified herein and as directed by the Engineer, therefore minimizing the amount of area susceptible to erosion and reducing the amount of temporary seeding. The Engineer will determine if any temporary erosion control systems shown in the plan can be deleted and if any additional temporary erosion control systems, which may not be included in this plan, shall be added. The contractor shall perform all work as directed by the Engineer and as shown in Standard 280001.

Section 280. Temporary erosion control, of the standard specifications additionally supplements this plan.

SITE DESCRIPTION & DESCRIPTION OF CONSTRUCTION ACTIVITY:

1. The project is located North of 159th Street and West of 89th Avenue in Orland Park, IL. The site disturbance acreage is 0.098 acres.
2. Construction includes earthwork, parking improvements, and storm sewer improvements for a proposed site.
3. The project is not within the 100-year Floodplain limits and no Wetlands are present .

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTION OF THE CONSTRUCTION SITE:

Erosion control silt fencing shall be in placed prior to earthwork activities.

Site shall be cleared. Topsoil will be remove and graded as necessary, with all proposed roads graded to roughly 1-foot below final elevation on plans.

After completion of storm sewer construction, storm sewer inlet protection shall be placed at each open-grate structure.

Parking areas shall be constructed.

AREA OF CONSTRUCTION SITE:

The total area of the construction site is estimated to be 0.098 acres by which 0.098 acres will be disturbed by excavation, grading, and other activities. Of this 0.098 acres, 0.00 acres are construction within the Public R.O.W.

OTHER REPORTS, STUDIES AND PLANS, WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

1. Information of the soils and terrain within the site was obtained from topographic surveys and soil borings that were utilized for the development of the proposed temporary erosion control systems.
2. Project plan documents, specifications and special provisions, and plan drawings indicating drainage patterns and approximate slopes anticipated after grading activities were utilized for the proposed placement of the temporary erosion control systems.

DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:

1. The site shall drain into existing stormwater detention ponds by means of a proposed storm sewer system, and overland flow. The stormwater detention system reduces the peak stormwater runoff before discharging into existing Village storm sewer system.

CONTROLS, EROSION CONTROLS AND SEDIMENT CONTROL:

1. The drawings, specifications and special provisions will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices include temporary seeding, permanent seeding, mulching, protection of trees, preservation of nature vegetation, and other appropriate measures as directed by the Engineer. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

a. Areas of existing vegetation, wood and grasslands, outside the proposed construction limits shall be identified by the Engineer for preserving and shall be protected from construction activities.

b. Dead, diseased, or unsuitable vegetation within the site shall be removed as directed by the Engineer, along with required tree removal.

c. As soon as reasonable access is available to all locations where water drains away from the project, temporary perimeter erosion barrier shall be installed as called out in this plan and directed by the Engineer.

d. Bare and sparsely vegetated ground in high erodible areas as determined by the Engineer shall be temporarily seeded at the beginning of construction where no construction activities are expected within seven (7) days.

e. Immediately after tree removal is completed, areas which are highly erodible as determined by the Engineer, shall be temporarily seeded when no construction activities are expected within seven (7) days.

2. Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and over seeding can be completed.

3. The Village of Orland Park is responsible for conducting site visits and verifying that the practices are working properly and determine if additional practices are needed for better soil erosion and sediment control. If additional practices are deemed necessary by the Village the contractor will implement the practice in a timely manner.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:

1. During construction, areas outside the construction limits as outlined previously herein shall be protected. The contractor shall not use this area for staging, parking of vehicles of construction equipment, storage of materials or other construction related activities.

(a.) Within the construction limits, areas which may be susceptible to erosion as determined by the Engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.

(b.) As construction proceeds, the contractor shall institute the following as directed by the Engineer.

i. Place temporary erosion control facilities at locations shown on the plans.

ii. Temporarily seed erodible bare earth on a weekly basis to minimize the amount of erodible surface area within the contract limits.

iii. Provide temporary erosion control systems.

iv. Continue building up the embankment to the proposed grade while, at the same time, placing permanent erosion control final shaping to the slopes.

(c.) Excavated areas and embankment shall be permanently seeded immediately after final grading. If not, they shall be temporarily seeded if no construction activity in the area is planned for seven (7) days.

(d.) Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or other pollutant in accordance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.

(e.) The contractor shall inspect the project daily during construction activities. Inspection shall also be done weekly and after rains of 1/2-inch or greater or equivalent snowfall and during the winter shutdown period. The project shall additionally be inspected by the construction field Engineer on a biweekly basis to determine that erosion control efforts are in place and effective and if other erosion control work is necessary.

(f.) Sediment collected during construction of the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance shall be included in the unit bid price for earth excavation for erosion control.

(g.) The temporary erosion control systems shall be removed, as directed by the Engineer, after use is no longer needed or no longer functioning.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING:

1. Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas sodded and established.
2. Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded.
3. Upon completion of the industrial buildings, permanent landscaping features, including sod, will be established.

MISCELLANEOUS:

1. Temporary erosion control seeding shall be applied at a rate of 100 lbs/acres, if directed.
2. Straw bales, hay bales, perimeter erosion barrier and silt fences will not be permitted for temporary or permanent ditch checks. Ditch checks shall be composed of aggregate, silt panels, rolled excelsior, urethane form/geotextile silt wedges, and/or any other material approved by the erosion and sediment control coordinator.
3. Sediment collected during construction by the various temporary erosion control systems shall be disposed of on the site on a regular basis, as directed by the Engineer. The cost of this maintenance shall be paid for at the contract unit price per cubic yard for earth excavation.
4. All erosion control products furnished shall be specifically recommended by the manufacturer for the use specified in the erosion control plan. Prior to the approval and use of the project, the contractor shall submit to the Engineer a notarized certification by the producer stating the intended use of the product and that the physical properties required for this application are met or exceeded. The contractor shall provide manufacturer installation procedures to facilitate the Engineer in construction inspection.

MAINTENANCE AFTER CONSTRUCTION:

Construction is complete after acceptance by the municipality. Maintenance up to this date will be by the contractor.

INSPECTION AND MAINTENANCE PLAN FOR STORMWATER MANAGEMENT STRUCTURES (BMPS)

	INSPECTION SCHEDULE	CORRECTIVE ACTIONS
VEGETATED AREAS	Annually early spring and after heavy rains	Inspect all slopes and embankments and replant areas of bare soil or with sparse growth
		Armor nll erosion areas with riprap or divert the runoff to a stable area
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Mow vegetation as specified for the area
DITCHES, SWALES AND OPEN STORMWATER CHANNELS	Annually spring and late fall and after heavy rains	Remove obstructions, sediments or debris from ditches, swales and other open channels
		Repair any erosion of the ditch lining
		Mow vegetated ditches
		Remove woody vegetation growing through riprap
		Repair any slumping side slopes
		Repair riprap where underlying filter fabric or gravel is showing or if stones have dislodge
CULVERTS	Spring and late fall and after heavy rains	Remove accumulated sediments and debris at the inlet, outlet, or within the conduit
		Remove any obstruction to flow
		Repair any erosion damage at the culvert's inlet and outlet
CATCHBASINS	Annually in the spring	Remove sediments and debris from the bottom of the basin and inlet grates
		Remove floating debris and oils (using oil absorptive pads) from any trap
ROADWAYS AND PARKING AREAS	Annually in the spring or as needed	Clear and remove accumulated winter sand in parking lots and along roadways
		Sweep pavement to remove sediment
		Grade road shoulders and remove accumulated winter sand
		Grade gravel roads and gravel shoulders
		Clean-out the sediment within water bars or open-top culverts
		Ensure that stormwater runoff is not impeded by false ditches of sediment in the shoulder
RESOURCE AND TREATEMENT BUFFERS	Annually in the spring	Inspect buffers for evidence of erosion, concentrated flow, or encroachment by development
		Manage the buffer's vegetation with the requirements in any deed restrictions
		Repair any sign of erosion within a buffer
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Install more level spreaders, or ditch turn-outs if needed for a better distribution of flow
		Clean-out any accumulation of sediment within the spreader bays or turnout pools
		Mow non-wooded buffers no shorter than six inches and less than three times per year
WETPONDS AND DETENTION BASINS	Annually in fall and after heavy rains	Inspect the embankments for settlement, slope erosion, piping, and slumping
		Mow the embankment to control woody vegetation
		Inspect the outlet structure for broken seals, obstructed orifices, and plugged trash racks
		Remove and dispose of sediments and debris within the control structure
		Repair any damage to trash racks or debris guards
		Replace any dislodged stone in riprap spillways
		Remove and dispose of accumulated sediments within the impoundment and forebay
FILTRATION AND INFILTRATION BASINS	Annually in the spring and late fall	Clean the basin of debris, sediment and hydrocarbons
		Provide for the removal and disposal of accumulated sediments within the basin
		Renew the basin media if it fails to drain within 72 hours after a one inch rainfall event
		Till, seed and mulch the basin if vegetation is sparse
		Repair riprap where underlying filter fabric or gravel is showing or where stones have dislodged
PROPRIETARY DEVICES	As specified by manufacturer	Contract with a third-party for inspection and maintenance
		Follow the manufacturer's plan for cleaning of devices
OTHER PRACTICES	As specified for devices	Contact the department for appropriate inspection and maintenance requirements for other drainage control and runoff treatment measures

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATES:

The following certificates shall be executed & provided to the Village of Orland Park and Engineer with a copy at the job site:

a. Contractor Certification Statement: "I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR-10) that authorizes the storm water discharges associated with activity from the construction site identifies as part of this certification."

By: ______________________
Contractor

b. Owner Certification Statement: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

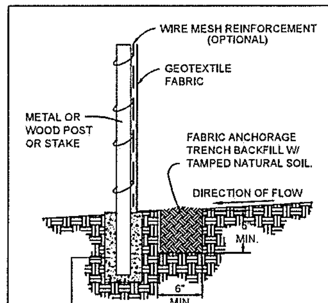
By: ______________________
Owner

The Village of Orland Park requires compliance with NPDES Phase II program. As such, all developments shall provide to the extent possible, construction site run-off control and illicit discharge prevention and elimination.

1. The owner is responsible for submitting the Notice of Intent (NOI) to the IEPA after the Storm Water Pollution Prevention Plan (SWPPP) is complete. The contractor is responsible for insuring that the NOI is postmarked at least 30 days before commencement of any work on site.
2. Prior to commencement of construction, the owner shall provide written notification to the IEPA of completion of the SWPPP and that said plan is available at the site.
3. The contractor is responsible for having the SWPPP on site at all times.
4. Inspection of controls will be completed by the owner at least once every 7 days and within 24 hours of a storm 0.5" or greater.
5. An Incident of Non-Compliance (ION) must be completed and submitted by the owner to the IPEA and copied to the Village if, at any time, an erosion or sediment control device fails.
6. A Notice of Termination (NOT) shall be completed by the owner in compliance with NPDES Phase II requirements when all permanent erosion control measures are in place with a 70% establishment rate of vegetation. The NOT shall be sent to the IEPA and the Village.
7. The contractor shall take the necessary steps to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality.

CONSTRUCTION ACTIVITY SEQUENCING:

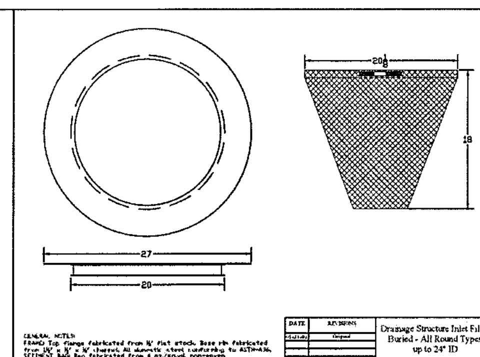
1. Place perimeter silt sock. ------------------------------ March, 2018
2. Establish stabilized construction entrance and concrete washout. - March, 2018
3. Strip topsoil from site. ------------------------------ March, 2018
4. Rough grade site. ------------------------------ April, 2018
5. Construct new building foundation. ------------------------------ April, 2018
6. Install/construct Storm Sewer System including inlet protection excavated drains. ------------------------------ April, 2018
7. Construct new pavement and curb. ------------------------------ May, 2018
8. Install final landscaping. ------------------------------ June, 2018

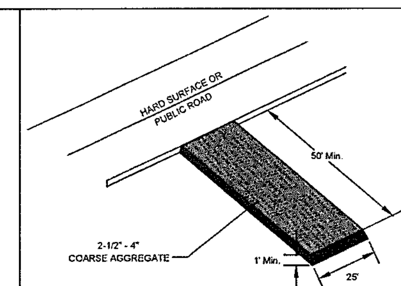


SUPPORT POST ANCHORAGE FROM IN-SITU SOIL TO CEMENT MORTAR.

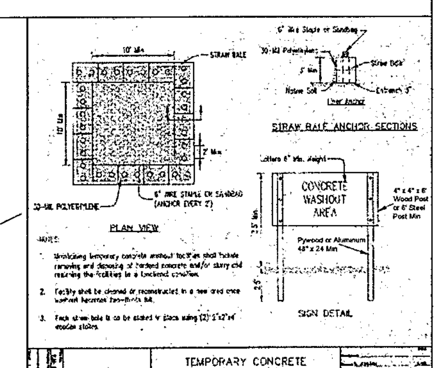
NOTE:
DEPENDING UPON CONFIGURATION, ATTACH FABRIC TO WIRE MESH W/HOG RINGS, STEEL POSTS W/TIE WIRES, WOOD POSTS W/NAILS.

SILT FENCE DETAIL
N.T.S.





CONSTRUCTION ENTRANCE
N.T.S.



SOIL PROTECTION CHART

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A —	—	—	*	*	—	*			
DORMANT SEEDING	B —	—	—								B —	—
TEMPORARY SEEDING			C —	—	—	—	D —	—	—			
SODDING			E** —	—	—	—	—	—	—			
MULCHING F	—	—	—	—	—	—	—	—	—	—	—	—

A. KENTUCKY BLUEGRASS 90 LBS./AC. MIXED WITH PERENINIAL RYEGRASS 30 LBS./AC.
B. KENTUCKY BLUEGRASS 135 LBS./AC. MIXED WITH PERENINIAL RYEGRASS 45 LBS./AC. + 2 TONS STRAW MULCH PER ACRE.
C. SPRING OATS 100 LBS./AC.
D. WHEAT OR CEREAL RYE 150 LBS./AC.
E. SOD.
F. STRAW MULCH 2 TONS/AC.

* IRRIGATION NEEDED DURING JUNE, JULY AND SEPT.
** IRRIGATION NEEDED FOR 2-3 WEEKS AFTER SODDING.

THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR MAINTENANCE OF ALL SOIL EROSION CONTROL MEASURES DURING CONSTRUCTION AND THE OWNER WILL ASSUME RESPONSIBILITY OF ALL SOIL EROSION CONTROL MEASURES AFTER CONSTRUCTION.

INSPECTION SCHEDULE
1. DIVERSION AND STRUCTURAL MEASURES - WILL BE INSPECTED AT WEEKLY INTERVALS OR AFTER EVERY RAIN STORM PRODUCING RUNOFF.
2. SEDIMENT BASINS AND PONDS - WILL BE CHECKED AFTER EACH MAJOR PHASE OF THE DEVELOPMENT FOR SEDIMENT ACCUMULATION.
3. VEGETATIVE PLANTINGS - SPRING PLANTINGS WILL BE CHECKED DURING SUMMER OR EARLY FALL.
4. REPAIRS - ANY EROSION CONTROL MEASURES, STRUCTURAL MEASURES, OR OTHER RELATED ITEMS IN NEED OF REPAIR WILL BE MADE WITHIN 1-2 DAYS.
5. MOWING - DRAINAGEWAYS, DITCHES AND OTHER AREAS THAT SUPPORT A DESIGNED FLOW OF WATER WILL BE MOWED REGULARLY TO MAINTAIN THAT FLOW.
6. FERTILIZATION - SEEDED AREAS WHERE THE SEED HAS NOT PRODUCED A GOOD COVER, WILL BE INSPECTED AND FERTILIZED AS NECESSARY.

CONSTRUCTION SEQUENCE AND RESPONSIBLE CONTRACTOR	UNDERGROUND CONTRACTOR	LANDSCAPE CONTRACTOR
1. INSTALL SEDIMENT CONTROL MEASURES:		
VC VEGETATIVE CHANNEL	■	■
BF BARRIER FILTER	■	
SE STABILIZED CONSTRUCTION ENTRANCE	■	
2. GRADE SITE/STOCKPILE TOPSOIL.	■	
3. PRESERVE AND PROTECT EXISTING VEGETATION.	■	
4. TEMPORARY VEGETATIVE STABILIZATION OF CONTROL MEASURES:		
TS TEMPORARY SEEDING		■
VF VEGETATIVE FILTER		■
M MULCHING		■
5. VEGETATIVE COVER ON ALL AREAS TO BE EXPOSED LONGER THAN 7 DAYS:		
TS TEMPORARY SEEDING	■	■
6. PERMANENT VEGETATIVE STABILIZATION OF ALL EXPOSED AREAS WITH 7 DAYS OF:		
PS PERMANENT SEEDING		■
SO SODDING		■
7. INSTALL PERMANENT LANDSCAPING & REMOVE TEMPORARY EROSION CONTROL		■
8. PERFORM CONTINUING MAINTAINENCE.	■	■

NOTE:
PROVIDE TEMPORARY SEEDING FOR ALL DISTURBED PARKWAYS, EASEMENTS, DETENTION PONDS ETC. TO BE LEFT LONGER THAN 7 DAYS BEFORE PERMANENT SEEDING/FINAL LANDSCAPING IS TO OCCUR.

Joseph A. Schudt & Associates
9455 ENTERPRISE DRIVE MOKENA, IL 60448
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065
(184-001172)
CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES

REVISIONS:
REV. 01-26-18

VOLKSWAGEN OF ORLAND PARK
8920 W. 159th ST., ORLAND PARK, IL
STORM WATER POLLUTION PREVENTION PLAN

Date: 11-17-17
Scale: N/A
File Name: 2017-17-053-ENG
Drawn: JAR
Checked: DWO
Sheet: 5 OF 7
Project No.: 17-053

GENERAL CONDITIONS

1. Village of Orland Park - Public Works (Telephone 708-444-5500), M.W.R.D. Sewer Permit Office (Telephone 708-588-4055), and Joseph A. Schudt & Associates (Telephone 708-720-1000) must be notified (2) working days prior to commencement of work.

2. The Standard Specifications, construction plans and subsequent details are all to be considered as part of the contract. Incidental items or accessories necessary to complete this work may not be specifically noted but are to be considered a part of the contract.

3. Prior to commencement of construction, the contractor shall verify all dimensions and conditions at the job site. In addition, the contractor must verify the Engineer line and grade stakes. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the Engineer before doing any work, otherwise the contractor assumes full responsibility. In the event of disagreement between the construction plans, standard specifications and/or special details, the contractor shall secure written instructions from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. Failing to secure such instructions, the contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or question rising with respect to the true meaning of the construction plans or specifications, the decision of the Engineer shall be final and conclusive.

4. All work performed under this contract shall be guaranteed by the contractor and his surety for a period of 12 months from the date of final acceptance of the work by the Municipality against all defects in materials and workmanship of whatever nature.

5. Before acceptance by the Owner and final payment, all work shall be inspected and approved by the Owner or his representative. Final payment will be made after all of the contractor's work has been approved and accepted.

6. Upon award of the contract and when required by the Municipality, the contractor shall furnish a labor, material and performance bond per Municipality requirements guaranteeing completion of the work. The underwriter shall be acceptable to the Municipality. Maintenance Bond after construction may also be required.

7. Easements for the existing utilities, both public and private, and utilities within public rights-of-way are shown on the plans according to available record. The contractor shall be responsible for determining the exact location in the field of these utility lines and their protection from damage due to construction operations. If existing utility lines of any nature are encountered which conflict in location with new construction, the contractor shall notify the Engineer so that the conflict may be resolved.

8. Removed pavement, sidewalk, curb and gutter, etc. shall be disposed of at off-site locations provided by the contractor at his own expense.

9. The contractor shall be responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices to inform and protect the public during all phases of construction. One lane in each direction shall be open to traffic at all times except between the hours of 9 A.M. to 3 P.M. During this period all work must be performed in accordance with standards 701201, 701206, and 701401.

10. Barricades and warning signs shall be provided in accordance with article 107.14 of the Standard Specifications. Adequate lighting shall be maintained from dusk to dawn at all locations where construction operations warrant or as designated by the Engineer. Traffic control standards which shall be included for use during construction are: 702001, 701201, 701206, 701301, 701401, 701501, 701606, and 701701. Stop signs must be installed as soon as access is available.

11. Commonwealth Edison (Com-Ed), A.T.&T. Telephone, and Ni-Cor Gas have underground and/or overhead service facilities in the vicinity of the proposed work, the contractor shall be responsible for having the utility companies locate their facilities in the field prior to construction and shall also be responsible for the maintenance and preservation of these facilities. The contractor shall call J.U.L.I.E. at "811" or (800) 892-0123 for utility locations.

12. Whenever the performance of work is indicated on the plans, and no item is included in the contract for payment, the work shall be considered incidental to the contract, and no additional compensation will be allowed.

13. All existing traffic signs, street signs, etc., which interfere with construction operations and not noted for removal or disposal shall be removed and reset by the contractor at locations as designated by the Engineer. This shall be considered incidental to the contract and no additional compensation shall be allowed. Damage to these items shall be repaired by the contractor at his own expense. All signs not required to be reset shall be delivered to the Municipality or County as appropriate.

14. All permanent type pavements or permanent improvements which abut the proposed improvement and must be removed, shall be saw-cut prior to removal. All items so removed shall be replaced with similar construction materials to their original condition or better. Payment for sawing shall be included in the cost for removal of each item and replacement will be paid under the respective items in the contract, unless otherwise indicated.

15. Where overhanging branches interfere with operations of construction, said branches shall be trimmed and sealed in accordance with section 645.09 of the Standard Specifications, and the cost of same shall be incidental to the contract. If trees or shrubs must be removed, they will be paid for in accordance with the specifications.

16. The contractor shall submit in writing a "Schedule of Operations" showing approximate dates for commencing and completing various phases of construction under this contract. The schedule shall have the approval of the Engineer and the date for starting shall be mutually agreed upon between the contractor and the Engineer.

17. Special attention is drawn to the fact that article 105.06 of the Standard Specifications require the contractor to have a competent superintendent on the project site at all times irrespective of the amount of work sublet. The superintendent shall be capable of reading and understanding the plans and specifications, shall have full authority to execute orders to expedite the project, and shall be responsible for scheduling and have control of all work as the agent of the general contractor. Failure to comply with the provision will result in a suspension of work as provided in Article 108.07.

18. Water Valve boxes and Buffalo boxes that are uncovered during construction shall be adjusted to grade prior to restoring the pavement, sidewalk or parkway. The cost of same shall be considered as incidental to the contract.

19. It shall be the responsibility of the contractor to remove from the site any and all materials and debris which result from his construction operation at no additional expense to the Owner.

20. The Municipality and/or the Governing Agency shall be notified 48 hours prior to the start of any construction.

EARTHWORK

1. Work under this section shall include but not be limited to the following:

   A. Clearing and removing from the site, all undesirable trees and other vegetative growth within the construction area. Tree removal shall be kept to a minimum.

   B. Stripping of topsoil from all excavation, pavement and structural clay fill areas.

   C. Stockpiling of topsoil at locations as directed by the Owner or Engineer. Topsoil stockpiled for future use shall be relatively free from large roots, sticks, weeds, brush, stones larger than one (1) inch diameter or other litter and waste products including other extraneous materials not conductive to plant growth. Topsoil shall be stockpiled in sequence to eliminate any rehandling or double movements by the contractor.

   D. Clay cut and Clay fill with compaction within roadway and all other structural fill areas.

   E. Clay Cut and Excavation of all lakes and waterways per plan including all treatments.

   F. Placement and compaction of clay to standards as required on the construction plans to the design subgrade elevations. The contractor will note that the elevations shown on the construction plans are finished grade elevations and that pavement thickness must be subtracted to determine subgrade elevations. The contractor may obtain required clay fill from on-site excavation and on-site borrow excavation as directed by the Engineer, or Owner.

   G. Backfilling and compaction behind new curbs and gutters.

   H. Movement and compaction of soil material from the construction of underground utilities.

   I. Topsoil Placement to design finished grade elevations (6" minimum or as otherwise noted).

   J. If required, removal from site of all excess earth material including excess utility trench spoil after final grading.

2. The quantities given in the Engineer's Bid Proposal for earthwork is intended as a guide for the contractor in determining the scope of the completed project. It is the contractor's responsibility to determine all material quantities and appraise himself of all site conditions. The contract price submitted by the contractor shall be considered as lump sum for the complete project. No claims for extra work will be recognized unless ordered in writing by the Engineer, and/or Owner.

3. Proposed pavement areas and when applicable, building pads, driveways and sidewalks shall be excavated or filled to plus or minus 0.1 foot of design subgrade elevations by the contractor.

4. The subgrade shall be free of unsuitable material and shall be compacted to a minimum of ninety-five (95) percent of modified proctor density. Testing for compaction shall be the responsibility of the contractor.

5. Upon completion of the surface improvements, the excavator shall respread a 6" layer of topsoil on all disturbed parkway, berm, and detention pond areas.

6. During construction operations, the contractor shall insure positive site drainage at the conclusion of each day. Site drainage may be achieved by ditching, pumping or any other method acceptable to the Engineer. The contractor's failure to provide the above will preclude any possible added compensation requested due to delays or unsuitable materials created as a result thereof.

7. Whenever, during construction operations, any loose material is deposited in the flow line of gutter, drainage structures, ditches, etc., such that the natural flow line of water is obstructed, this loose material shall be removed at the close of each working day. At the conclusion of construction operations, all drainage structures and flow lines shall be free from dirt and debris. This work shall be considered incidental to the contract.

8. All disturbed areas within the right-of-way, parkways and detention areas shall be seeded with I.D.O.T. CL. I mixture in accordance with the "Standard Specifications" unless otherwise noted on landscape plans and protected with Excelsior Erosion Blanket or equal.

9. Soil erosion control specifications shall be considered as part of this section.

10. All earthwork and utility spoils to be hauled offsite shall be tested by the contractor for disposal requirements.

UNDERGROUND

1. Work under this section shall include trenching, installation of pipe, castings, structures, backfilling of trenches and compaction.

2. All manholes and valve vaults shall be equipped with steps. Manholes will contain plastic coated steps per Precast Concrete Manhole Detail at 16 inch centers.

3. All sewer and water main trenches beneath proposed or existing utilities, proposed or existing pavement, driveways, sidewalks and for a distance of two feet on either side of same, and/or wherever else shown on the construction plan shall be backfilled with course aggregate backfill (CA-6) and thoroughly compacted in accordance with the State Specifications.

4. All structure sections, adjusting rings and frames shall be securely sealed to each other or to the cone section or top barrel section of the manhole using resilient, fllexible, non-hardening, preformed, bituminous mastic (RAM-NEK, or Approved Equal). This mastic shall be applied in such a manner that no surface water or ground water inflow can enter the manhole through gaps between barrel sections or cone sections and adjusting rings. (ASTM C-478 STRUCTURES)

5. The underground contractor shall stock pile all utility spoil in an area designated by the Engineer or Owner. This work shall be considered incidental to the contract. If authorized to do so, the underground contractor shall level out and disburse all utility spoil or remove it from the site. If no Earthwork Contract is awarded for this project, the underground contractor shall be responsible for removal of all excess Utility Spoil from the site. This work shall be considered incidental to the contract.

6. The construction will be observed by the Owners Engineer. All work shall conform to the requirements of the Municipality as well as the Standard Specifications.

7. The contractor shall provide the Engineer and the Municipality, and/ or the Governing Agency, with prints and/or legible Mylar Record Drawings of all field tiles, cleanouts, wyes, service stubs, B-Boxes, and underdrains as required.

8. Separation between water mains and sewers must be maintained in accordance with Section 41-2.01B, C, & D of the "Standard Specifications". For storm sewer pipes that cross water mains, the storm sewer must be constructed of low head pressure pipe meeting ASTM C-443. The flexible "O" ring utilized in the type of joint must be properly seated to insure water-tightness.

9. Watermain and fittings shall be ductile iron pipe, Class 52 (AWWA C-151) with interior cement mortar lining and outside seal coating (AWWA C-104). The ductile iron pipe, fittings, and appurtenances shall be encased in polywrap according to AWWA C-105, unless a soil site survey has been performed and non-corrosive soils were found to exist. The soil survey shall meet AWWA Soil Test Specs. Joints shall be push on type, Clow Company "Super Bell-Tite" or approved equal. Minimum cover from finished grade to top of watermain shall be 5 feet.

10. Valves shall be Mueller, Clow, or approved equal, mechanical joint, resilient wedge seat, cast iron, bronze mounted, o-ring seal, bronze non-rising stem, gate valve. All valves shall be rated for 300 PSI test pressure and 150 PSI working pressure.

11. All watermains shall be bedded with compacted, granular CA-11 materials, minimum thickness equal to 1/4 the outside diameter of the pipe, but not less than 6".

12. All bends in the watermain of 10 degrees or greater shall be installed with thrust blocking or as directed by project Engineer per standard detail.

13. Valve boxes shall be good quality cast iron and made in sections, diameter as specified on the plans, with appropriate lids (see construction standards sheet). Lids shall be imprinted "Water".

14. Valve basins shall be of precast concrete per ASTM C-478 with bituminous mastic joints, 48 inch inside diameter with Type 1 frame and closed lid marked "Water".

15. All watermains shall be subjected to a pressure test upon completion and prior to acceptance. Installation of watermains shall conform to AWWA Section C-600-77. Hydrostatic pressure test and leakage test shall be based on the Municipality's requirements. The procedure for watermain disinfection shall conform to AWWA Section C-651-86.

16. All system valves shall be opened fully once the water mains have been tested completely. This system will be checked by the Municipality's Fire Department for adequate fire flows as soon as possible after the water mains are completed.

17. All hydrants shall be of the compression or gate type, as manufactured by Waterous, or approved equal.

18. All floor drains shall be connected to the sanitary sewer and all downspouts and footing drains shall discharge into storm sewer or onto the ground.

19. Curb inlets are to be EJIW 7010 Type M-3 HD, or as indicated on the plans.

20. Rigid Sanitary Sewers and Storm Sewers shall be installed on Class B bedding, 1/4" to 1" in size, with a minimum thickness equal to that identified on the appropriate sewer section indicated on the detail sheet. Blocking of any kind for grade is not permitted. Bedding material shall conform to the requirements of ASTM C-33 for soundness and CA-11 for gradation. Cost for bedding shall be merged with unit price bid for the sewer.

21. Where flexible pipe is used, the pipe shall be installed on Class I Bedding and additional backfill extending to 12" over the pipe. Backfilling shall be in accordance with ASTM 2321. A deflection test shall be required by using a Rigid Ball or Mandrel as required in accordance with ASTM D-3034. A 95% Mandrel is required and will not be used prior to 45 days after backfilling.

22. 'Band-Seal' or similar flexible type couplings shall be used when connecting sewer pipes of dissimilar materials. When connecting to an existing sanitary sewer by means other than an existing wye or manhole, contractor shall use a 'sewer-tap' and hub-wye or hub-tee saddle.

23. All Sewer Main connections to an existing sanitary sewer main shall be with a manhole.

24. Sanitary sewers shall be PVC SDR 26 (ASTM 3034) with rubber gasketed joints (ASTM D-3212) and shall be installed according to the requirements of Uni-B-79. Only Class I bedding material shall be allowed according to the requirements of ASTM D-2321. Connection to the existing sanitary manhole shall be completed by removing a portion of the existing main and connecting the manhole utilizing PVC SDR 26 (ASTM 3034) pipe and a mission coupling. A "doghouse-style" manhole is not allowed. The manhole shall be provided with flexible manhole sleeves for the PVC pipe connection. Sanitary sewers, where indicated as ductile iron, shall be AWWA C151, Class 52 with cement lining (AWWA C104) and rubber push on joints (AWWA C110).

25. All sanitary sewer manholes shall have eccentric cones; cone openings shall be centered over the outlet pipe. All precast structures to be as per ASTM C-478.

26. Sanitary sewer manholes shall be 4'-0" diameter precast structures. Manholes shall also include the appropriate frame and sealed lids.

PAVING, CURB & WALKS

1. Work under this section shall include final subgrade shaping and preparation, forming, placement of roadway base course materials and subsequent binder and/or surface courses, finishing and curing of concrete, final clean-up and all related work.

2. The proposed pavement shall consist of the subgrade course (as specified) base course, Bituminous Concrete Binder course, and Bituminous Concrete Surface course, Class 1, or the thickness and materials as specified on the construction plans. Prime coat material shall be bituminous M.C. - 30. Unless shown as a bid item, prime coat shall be considered as incidental to the cost of the contract. All pavement shall be constructed in accordance with the I.D.O.T. "Standard Specifications for Road and Bridge Construction", current edition.

3. Sidewalks and curb shall be of the type as detailed in the construction plans shall consist of Portland Cement Concrete with air entrainment of not less than five percent (5%) or more than eight percent (8%). Concrete shall be a minimum six (6) bag mix and shall develop a minimum of 3,500 PSI compressive strength at fourteen (14) days. All concrete shall be broom finished.

4. Curing and protection shall be in accordance with article 606 of the "Standard Specifications", current edition.

5. All damaged areas in the binder, base or curb shall be repaired to the satisfaction of the Engineer and Municipality prior to laying the surface course. The paving contractor shall provide whatever equipment and manpower necessary including the use of power brooms if required by the Engineer to prepare the pavement for application of the surface course. Equipment and manpower for cleaning shall be considered as incidental to the cost of the contract. Prime coat for the binder course shall also be considered as incidental to the cost of the contract and shall be applied to the binder at a rate of 0.05 gallons per square yard.

6. 3/4" thick Premoulded Fibre Expansion Joints with 3/4" x 13" plain round, steel dowel bars shall be installed at fifty (50) foot intervals and at all P.C.'S, P.T.'S, and curb returns. Alternated ends of the dowel bars shall be greased and fitted with metal expansion tubes. Contraction joints shall be provided at twenty-five (25) foot intervals in the curb. The cost of these joints shall be considered as incidental to the cost of the contract. Expansion joints shall be placed near all curb inlets.

7. Backfilling of curbs or pavement shall be the responsibility of the earthwork contractor.

8. Curbs shall be depressed at locations where public walks/pedestrian paths intersect curb line at street intersections and other locations as directed, in accordance with Americans with Disabilities Act (ADA) requirements.

9. Two (2) coats of concrete sealer in conformance with the Standard Specifications shall be applied to exposed concrete surfaces, cost of which shall be incidental to the cost of the contract.

10. It shall be the responsibility of the contractor to remove from the site any and all materials and debris which result from his construction operations at no additional expense to the Owner.

11. The paving contractor shall be responsible for providing all coring, testing, and pavement evaluation as required by the Municipality for acceptance at his own expense. The contractor shall include this as a separate bid item or else it will be assumed that this cost has been figured into the unit prices for the paving items. All testing results shall be made available to the Municipality for review.

12. Concrete sidewalks shall have three - 1/4 inch diameter, 10 foot long reinforcing rods centered over all utility crossings. Expansion joints shall be provided in the concrete sidewalks at 50 foot intervals.

SEDIMENTATION & EROSION CONTROL

1. All storm water runoff is to be directed to catch basins with proper sumps. Drainage Structure Inlet Filter Devices shall be placed in the catch basins, inlets, or manholes, so as to filter and contain any and all soil and debris.

2. When storm water is to be routed through existing or proposed detention basins, they are to be constructed immediately upon commencement of the project. Basins will be properly over excavated so as to provide sufficient volume for debris and settlement. If the drainage is in an existing basin, the upstream project will be properly protected so as to prevent siltation of the downstream basin.

3. All catch basins, sumps and/or retention basins are to be cleaned at the end of the project prior to final acceptance. Cleaning may also be required during the course of the construction of the project if it is determined that the silt and debris traps are not properly functioning and their performance is impaired.

4. Unless soil erosion control items are specifically referred to as bid items (such as topsoil respread, seeding, etc.), they are to be considered as incidental to the cost of the contract.

5. Soil erosion control measures in accordance with the "Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois", current edition, shall be followed at the discretion of the Municipality.

6. Any soil erosion control measures in addition to those outlined in these plans and which are deemed necessary by the Engineer, shall be implemented immediately by the contractor.

7. Seeding shall conform to section 250 of the "Standard Specifications".

Construction Specification --Pollution Control & Soil Erosion & Sediment Control

1. Scope
The work consists of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air from construction activities.

2. Material
All material furnished shall meet the requirements of the material specifications listed in this specification.

3. Erosion and sediment control measures and works
The measures and works shall include, but are not limited to, the following:
Staging of earthwork activities—The excavation and moving of soil materials shall be scheduled to minimize the size of areas disturbed and unprotected from erosion for the shortest reasonable time. ***Seeding***—Seeding to protect disturbed areas shall occur as soon as reasonably possible following completion of that earthwork activity.
Mulching—Mulching to provide temporary protection of the soil surface from erosion.
Diversions—Diversions to divert water from work areas and to collect water from work areas for treatment and safe disposition. They are temporary and shall be removed and the area restored to its near original condition when the diversions are no longer required or when permanent measures are installed.
Stream crossings—Culverts or bridges where equipment must cross streams. They are temporary and shall be removed and the area restored to its near original condition when the crossings are no longer required or when permanent measures are installed.
Sediment basins—Sediment basins collect, settle, and eliminate sediment from eroding areas from impacting properties and streams below the construction site(s). These basins are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.
Sediment filters—Straw bale filters or geotextile sediment fences trap sediment from areas of limited runoff. Sediment filters shall be properly anchored to prevent erosion under or around them. These filters are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.
Waterways—Waterways for the safe disposal of runoff from fields, diversions, and other structures or measures. These works are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.
Other—Additional protection measures as specified in section 8 of this specification or required by Federal, State, or local government.

4. Chemical pollution
The contractor shall provide watertight tanks or barrels or construct a sump sealed with plastic sheets to dispose of chemical pollutants, such as drained lubricating or transmission fluids, grease, soaps, concrete mixer washwater, or asphalt, produced as a by-product of the construction activities. At the completion of the construction work, sumps shall be removed and the area restored to its original condition as specified in section 8 of this specification. Sump removal shall be conducted without causing pollution. Sanitary facilities, such as chemical toilets, or septic tanks shall not be located next to live streams, wells, or springs. They shall be located at a distance sufficient to prevent contamination of any water source. At the completion of construction activities, facilities shall be disposed of without causing pollution as specified in this specification.

5. Air pollution
The burning of brush or slash and the disposal of other materials shall adhere to state and local regulations. Fire prevention measures shall be taken to prevent the start or spreading of wildfires that may result from project activities. Firebreaks or guards shall be constructed and maintained at locations shown on the drawings. All public access or haul roads used by the contractor during construction of the project shall be sprinkled or otherwise treated to fully suppress dust. All dust control methods shall ensure safe construction operations at all times. If chemical dust suppressants are applied, the material shall be a commercially available product specifically designed for dust suppression and the application shall follow manufacturer's requirements and recommendations. A copy of the product data sheet and manufacturer's recommended application procedures shall be provided to the engineer 5 working days before the first application.

6. Maintenance, removal, and restoration
All pollution control measures and temporary works shall be adequately maintained in a functional condition for the duration of the construction period. All temporary measures shall be removed and the site restored to near original condition.

7. Standards and Specifications
Standards and specifications for Soil Erosion and Sediment Control and other Pollution Controls shall be in accordance with the Illinois Urban Manual Standards as indicated below.

Illinois Urban Manual

Construction Specification Name	Code
Clearing	1
Clearing and Grubbing	2
Contractor Quality Control	94
Corrugated Polyethylene Tubing	44
Digging, Transporting, Planting and Establishment of Trees, Shrubs and Vines	707
Drainfill	24
Ductile-Iron Pipe	53
Earthfill	23
Excavation	21
Field Fence	92
Field Office	96
Geotextile	95
Identification Markers or Plaques	93
Mobilization and De-mobilization	8
Plastic Pipe	45
Pollution Control	5
Reinforced Concrete Pressure Pipe Conduits	41
Seeding, Sprigging and Mulching	6
Sodding	204
Stripping, Stockpiling, Site Preparation and Spreading Topsoil	752
Topsoiling	26
Traffic Control	

Illinois Urban Manual Practice Standard	Code	Date
Bioretention Facility	800	11/2013
Construction Road Stabilization	806	1/1999
Dust Control	825	2/1994
Erosion Control Blanket	830	6/2009
Filter Strip	835	1/1999
Infiltration Trench	847	1/1999
Inlet Protection - Fabric Drop	860	2/1994
Inlet Protection - Paved Areas	861	5/2011
Inlet Protection - Sod Filter	862	11/1999
Land Grading	865	2/1994
Mulching for Seeding and Soil Stabilization	875	6/2010
Permanent Vegetation	880	10/2001
Permanent Vegetation	880a	10/2001
Table A - Grass, Forb and Sedge Species for Low Maintenance Areas		
Permanent Vegetation	880b	10/2001
Silt Fence	920	4/2012
Sodding	925	12/1994
Stabilized Construction Entrance	930	8/1994
Temporary Concrete Washout Facility	954	6/2009
Temporary Sediment Trap	960	10/2001
Temporary Seeding	965	12/1994
Topsoiling	981	2/1994
Tree Protection	990	4/2000

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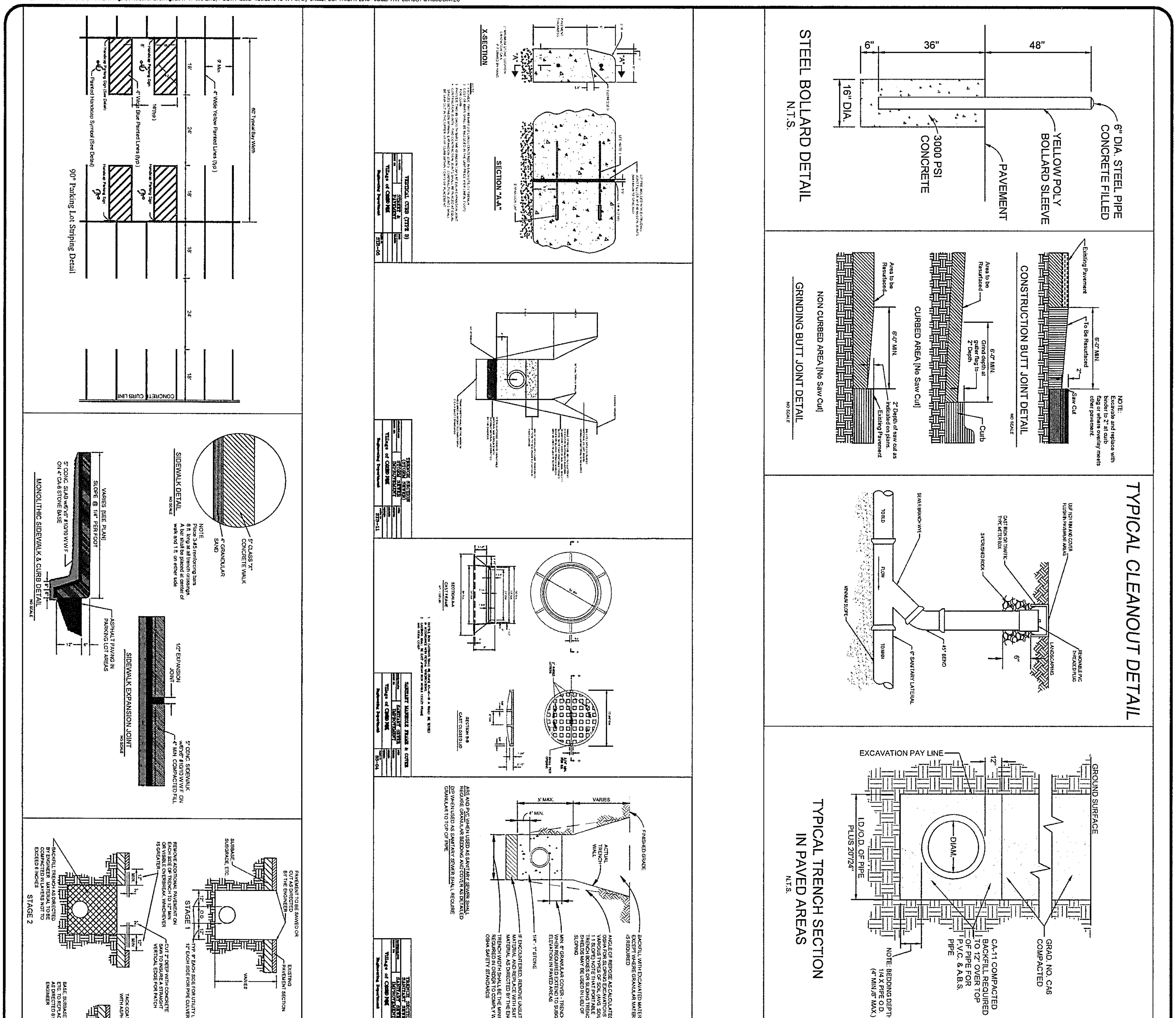
PHONE: 708-720-1000 www.jaseng.com FAX: 708-720-1065
CIVIL ENGINEERING LAND SURVEYING ENVIRONMENTAL LAND PLANNING GPS SERVICES

REVISIONS:

VOLKSWAGEN OF ORLAND PARK
8920 W. 159th ST., ORLAND PARK, IL
CONSTRUCTION SPECIFICATIONS

Date: 11-17-17
Scale: N/A
File Name: 2017-17-053-ENG
Drawn: JAR
Checked: DWO
Sheet: 6 OF 7
Project No.: 17-053



Date: 11-17-17
Scale: AS SHOWN
File Name: 2017-17-053-ENG
Drawn: JAR
Checked: DWO
Sheet: 7 OF 7
Project No.: 17-053

VOLKSWAGEN OF ORLAND PARK

8920 W. 159th ST., ORLAND PARK, IL

CONSTRUCTION DETAILS

REVISIONS:
REV. 01-26-18

(184-001172)
Joseph A. Schudt & Associates
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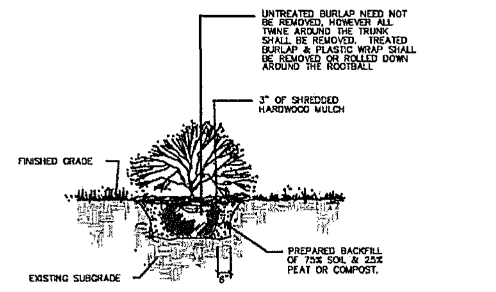
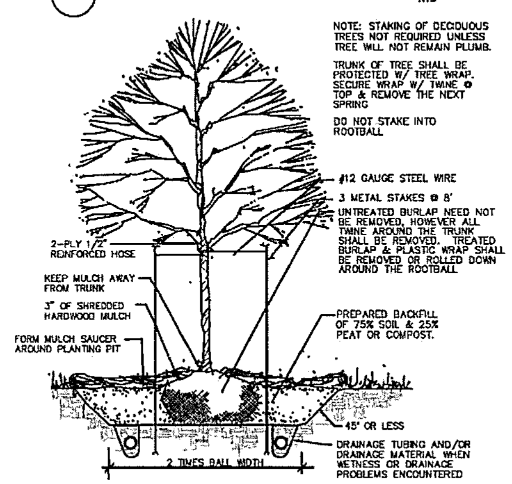


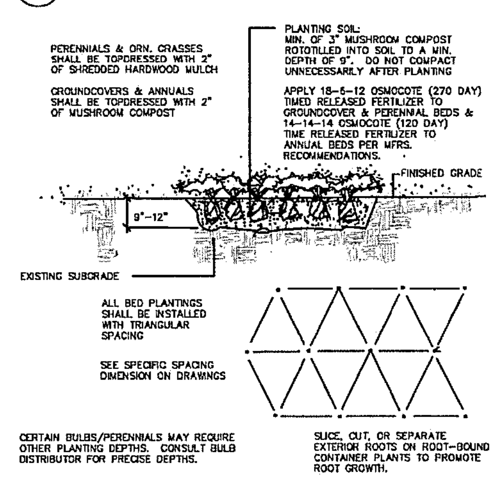
SHRUBS

NTS



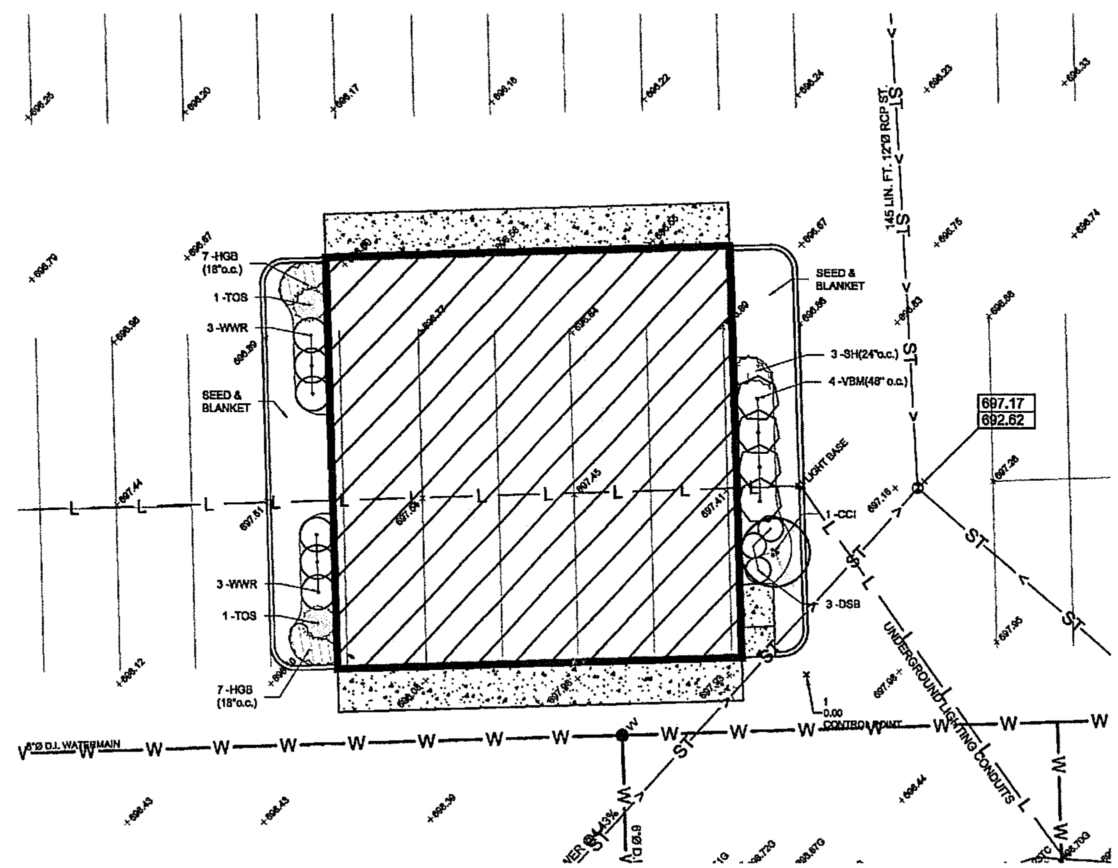
DECIDUOUS TREE

NTS



BED PLANTING DETAIL
(PERENNIALS, ORNAMENTAL GRASSES VINES, GROUNDCOVERS & ANNUALS)

NTS



LANDSCAPE CALCULATIONS:

Foundation - 92 LF less access doors
Req. Landscaping - 1 Ornamental Tree & 16 Shrubs per 100 LF along 50% of building facades
92 divided by 100 = .92

Plant Type	Req. Plant Quantity	Quantity Provided
Ornamental Tree	1 x .92 = .92 or 1 tree	1
Shrubs	16 x .92 = 14.7 or 15 shrubs	15

PLANT LIST:

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE & TYPE
CCI	1	Crataegus c. inermis	Thornless Cockspur Hawthorn	6' B/B cl.
DSB	3	Diervilla s. 'Butterfly'	Dwarf Bush Honeysuckle	24"/#5
TOS	2	Thuja o. 'Smaragd'	Emerald Green Arborvitae	4' B/B
VBM	4	Viburnum d. 'Christom'	Blue Muffin Viburnum	24"/#5
WWR	6	Weigela f. 'Alexandra'	Wine & Roses Weigela	24"/#5
HGB	14	Hemerocallis 'Going Bananas'	Going Bananas Daylily	#1
SH	3	Sporobolus heterolepis	Prairie Dropseed	#1

MATERIALS LIST:

QTY	ITEM	DESCRIPTION
3 C.Y.	Mulch	Shredded Hardwood Bark
½ C.Y.	Mulch	Compost (Mushroom or Yard Waste)
41 S.Y.	Seed & Blanket	IDOT Class 1A Salt Tolerant Lawn Mix NAG S75 Straw Blanket (or equal)

GENERAL NOTES:

Plant material shall be nursery grown and be either balled and bur-lapped or container grown. Sizes and spreads on plant list represent minimum requirements.

The requirements for measurement, branching and ball size shall conform to the latest addition of ANSI Z60.1, AMERICAN STANDARD OF NURSERY STOCK by the American Nursery & Landscape Association.

Any materials with damaged or crooked/disfigured leaders, bark abrasion, sunscald, insect damage, etc. are not acceptable and will be rejected. Trees with multiple leaders will be rejected unless called for in the plant list as multi-stem or clump (cl.).

If any mistakes, omissions, or discrepancies are found to exist with the work product, the Landscape Architect shall be promptly notified so that they have the opportunity to take any steps necessary to resolve the issue. Failure to promptly notify the Landscape Architect and the Owner of such conditions shall absolve them from any responsibility for the consequences of such failure.

Under no circumstances should these plans be used for construction purposes without examining actual locations of utilities on site, and reviewing all related documents mentioned herein, including related documents prepared by the project Civil Engineer and Architect.

Civil Engineering or Architectural base information has been provided by others. The location of various site improvements on this set of drawings is only illustrative and should not be relied upon for construction purposes.

Quantity lists are supplied as a convenience. However, Bidders and the Installing Contractor should verify all quantities. The drawings shall take precedence over the lists. Any discrepancies shall be reported to the Landscape Architect.

Actions taken without the knowledge and consist of the Owner and the Landscape Architect or in contradiction to the Owner and the Landscape Architect's work product or recommendations, shall become the responsibility not of the Owner and the Landscape Architect, but for the parties responsible for the taking of such action.

Refer to Civil Engineering documents for detailed information regarding size, location, depth and type of utilities, as well as locations of other site improvements, other than landscape improvements,

Plant symbols illustrated on this plan are a graphic representation of proposed plant material types and are intended to provide for visual clarity. However, the symbols do not necessarily represent actual plant spread at the time of installation.

All plant species specified are subject to availability. Material shortages in the landscape industry may require substitutions. All substitutions must be approved by the Village, Landscape Architect and Owner.

The Landscape Contractor shall verify location of all underground utilities prior to digging by calling "J.U.L.I.E." (Joint Utility Location for Excavators) 1-800-892-0123 and any other public or private agency necessary for utility location.

All perennial, ornamental grass, groundcover and annual beds shall be top dressed with a minimum of three inches (3") of mushroom compost. The top dressing shall be worked into the soil to a minimum depth of nine inches (9") by the use of a cultivating mechanism. Upon completion perennials & ornamental grasses shall be mulched with an additional two inch (2") layer of shredded wood mulch; Annuals & groundcovers shall be covered with an additional two inch (2") layer of mushroom compost.

All other planting beds and tree saucers shall be mulched with a minimum of three inches (3") of shredded wood mulch.

Planting beds adjacent to building shall be mulched in their entirety to the building foundation. Plant materials shall not be installed under building overhangs and other such areas which do not receive natural rainfall

All bed lines and tree saucers shall require a hand spaded edge between lawn and mulched areas.

Grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas

Sod shall be mineral base only.

Seed mixes shall be applied mechanically so that the seed is incorporated into the top one-half inch (1/2") of the seed bed. The seed shall then be covered with the specified blanket (installed per manufacturer's specs) or Hydro-mulch.

All plant material shall be guaranteed for one (1) year from the date of acceptance.

CALL
JULIE
48 HOURS
BEFORE YOU DIG
1-800-892-0123
TOLL FREE
Operates 24 Hours
Every Day

SCALE 1" = 10'
0 10 20

REVISIONS

NEW DETAIL BUILDING
VOLKSWAGEN
of ORLAND PARK

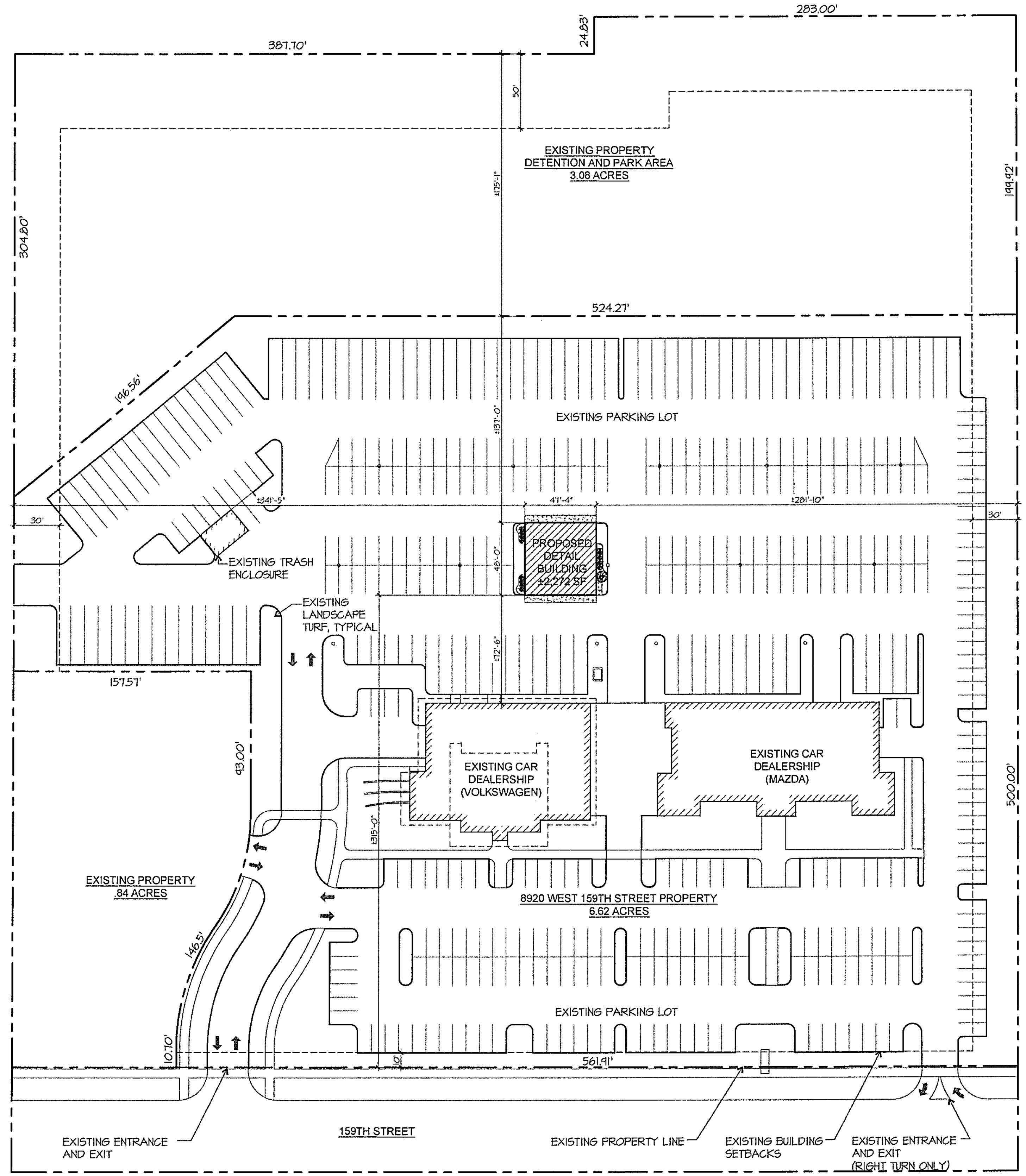
IRG Ives/Ryan Group, Inc.
324 EISENHOWER LANE N.
LOMBARD, IL 60148
PHONE: 630.717.0726
Landscape Architecture
Park & Recreation Design
Site & Community Planning
www.ivesryangroup.com

LANDSCAPE PLAN

PROJECT NO.: L1817
JOB NO.: 9010

DATE: 11/16/17
SCALE: 1"=10'
PLANNER: RM
DRAWN BY: RM
CHECKED: ______

SHEET
L-1



PRELIMINARY OVERALL SITE PLAN

SCALE: 1" = 40'

SITE DATA

ADDRESS: 8920 W 159TH STREET, ORLAND PARK, ILLINOIS

	EXISTING	PROPOSED	DIFFERENCE
TOTAL LOT:	288,841 SF	288,841 SF	NO CHANGE
BUILDING COVERAGE:	23,340 SF	25,612 SF	+2,272 SF
BUILDING COVERAGE RATIO	8.1%	8.9%	+0.8%
PARKING ON LOT:			
CUSTOMER PARKING	42 SPACES	42 SPACES	NO CHANGE
DISPLAY PARKING	372 SPACES	372 SPACES	NO CHANGE
EMPLOYEE PARKING	41 SPACES	41 SPACES	NO CHANGE
SERVICE PARKING	141 SPACES	127 SPACES	-14 SPACES
TOTAL PARKING	596 SPACES	582 SPACES	-14 SPACES
SITE COVERAGE AREA:	N/A		
FLOOR AREA RATIO:			
BUILDING 1 (VW)	18,360 SF	18,360 SF	NO CHANGE
BUILDING 2 (MAZDA)	24,150 SF	24,150 SF	NO CHANGE
BUILDING 3	-	2,272 SF	+2,272 SF
TOTAL AREA	42,510 SF	44,782 SF	+2,272 SF
FAR	0.15	0.16	+.01

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New Detail Building for:
VOLKSWAGEN of ORLAND PARK
8920 West 159th. Street
Orland Park, Illinois 60462

DATE	DRAWN	DESCRIPTION
11-17-2017		ISSUED FOR PRELIMINARY REVIEW
02-05-2018		REVISION #1

2017-0036
PROJECT NUMBER

FILE NUMBER

2-5-2018
DATE

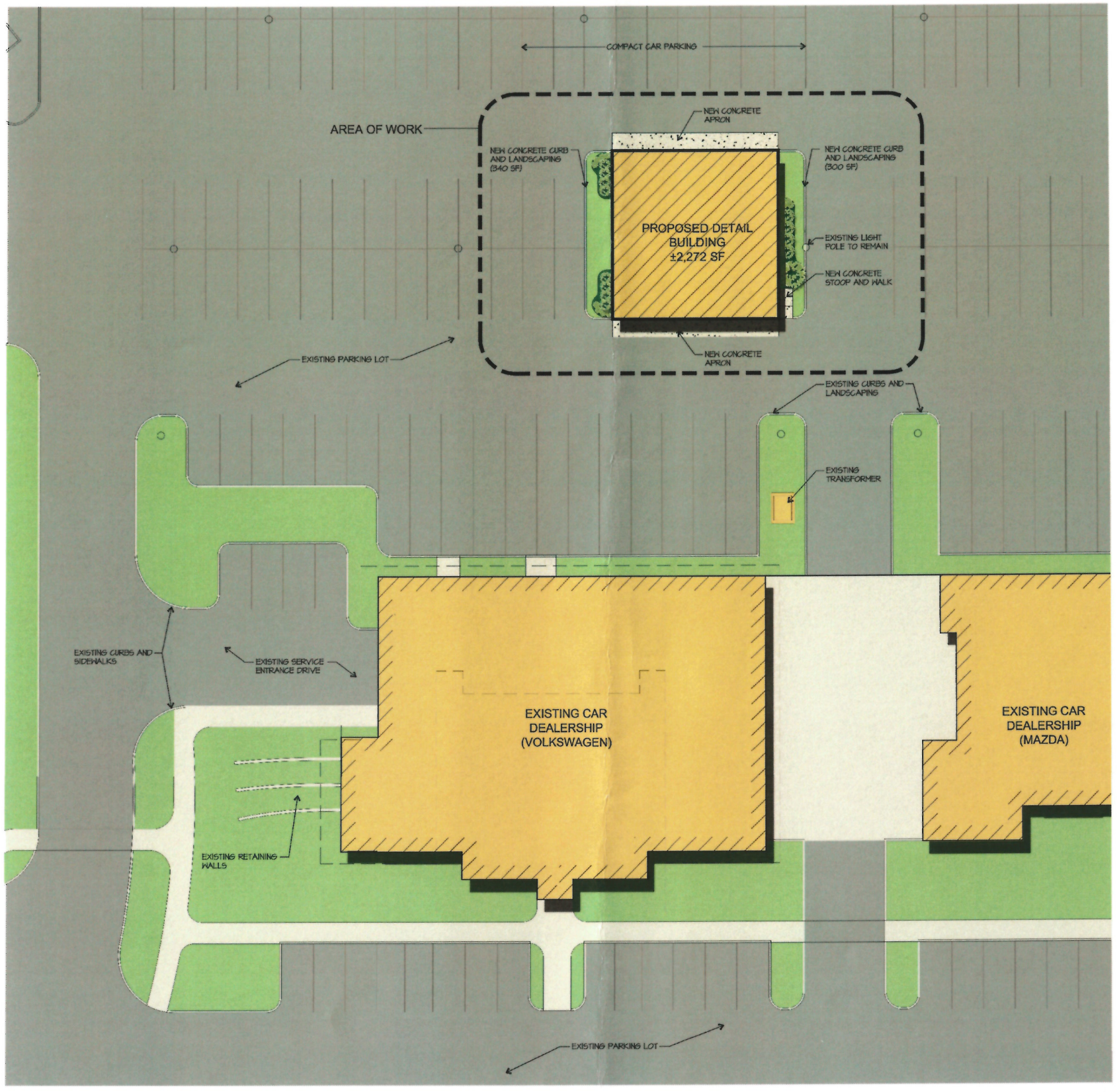
CT
DRAWN BY

FINAL REVIEW

PRELIMINARY OVERALL SITE PLAN
SHEET NAME

A-1.0
SHEET

SHEET 1 of 5



ARCHITECTURAL SITE PLAN

0 8'-0" 16'-0" 32'-0"

SCALE: 1/16" = 1'-0"

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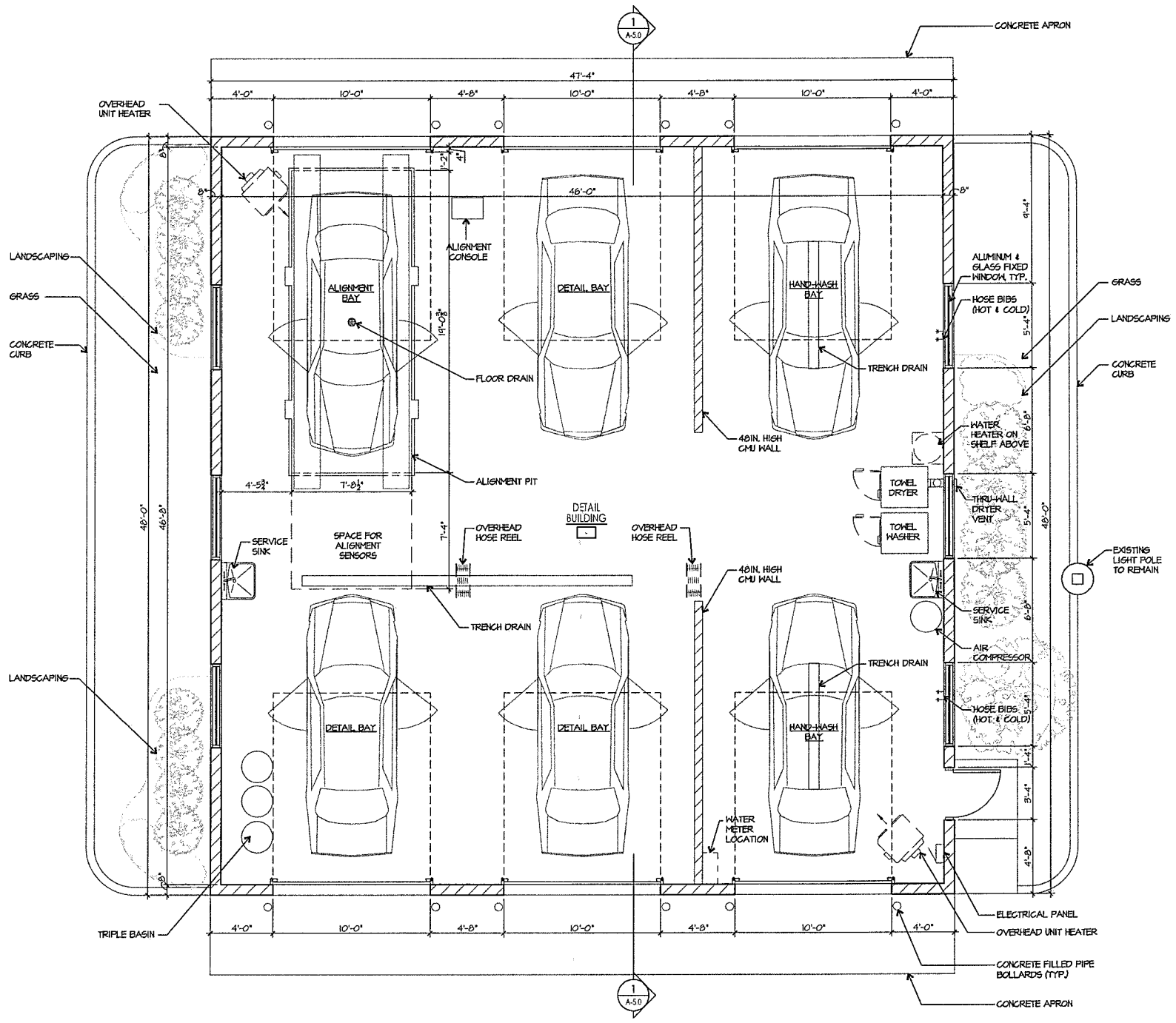
ARCHITECTURAL SITE PLAN

SHEET NAME
A-1.1
SHEET



PROPOSED DETAIL BUILDING FLOOR PLAN

PROPOSED BUILDING: 2,272 S.F.

0 2'-0" 4'-0" 8'-0"

SCALE: 1/4" = 1'-0"

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PROPOSED
FLOOR PLAN

SHEET NAME

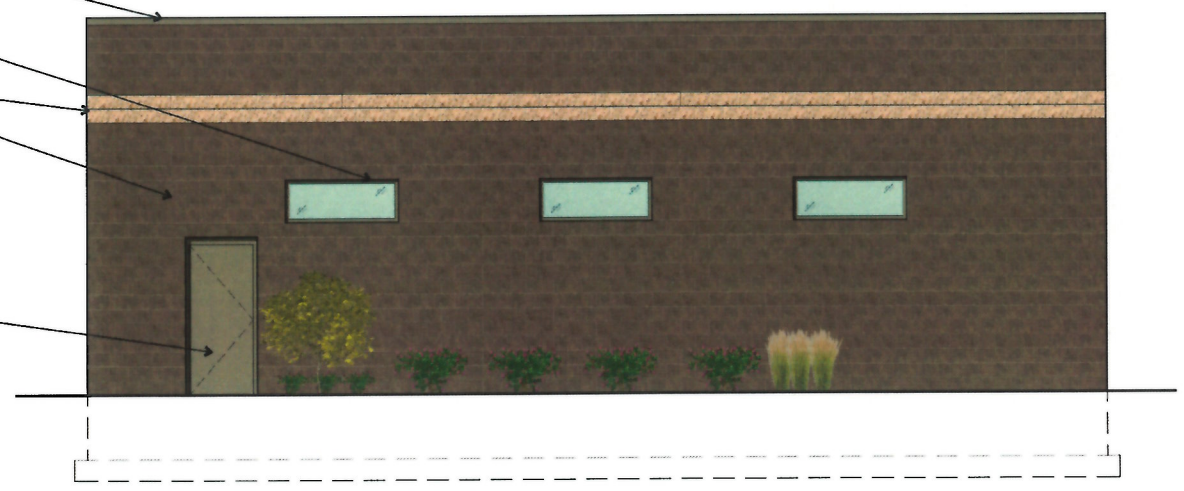
A-2.0

SHEET

1 A-4.0 **PROPOSED SOUTH ELEVATION**

0 2'-0" 4'-0" 8'-0"

SCALE: 1/4" = 1'-0"



2 A-4.0 **PROPOSED EAST ELEVATION**

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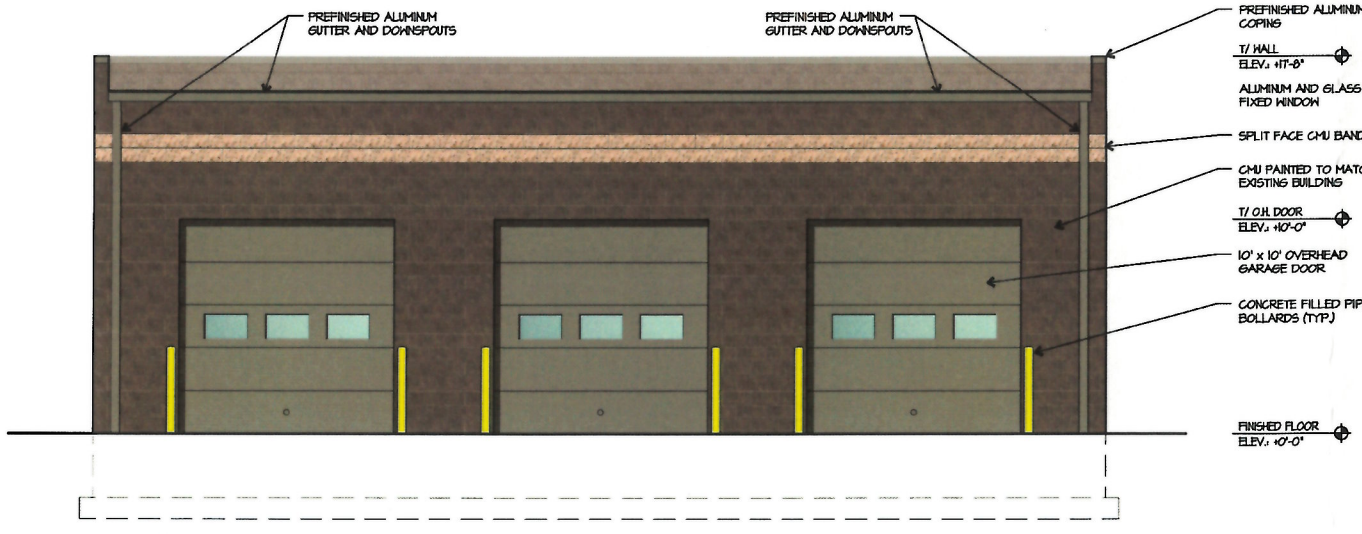
SCALE: 1/4" = 1'-0"



3 A-4.0 **PROPOSED NORTH ELEVATION**

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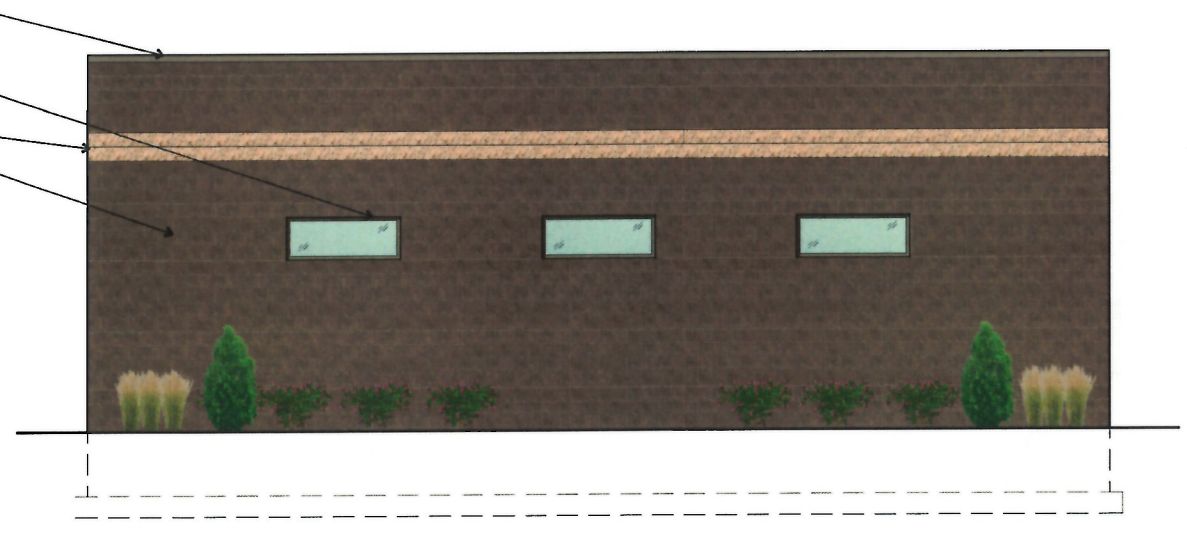
SCALE: 1/4" = 1'-0"



4 A-4.0 **PROPOSED WEST ELEVATION**

0 2'-0" 4'-0" 8'-0"

SCALE: 1/4" = 1'-0"

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DATE

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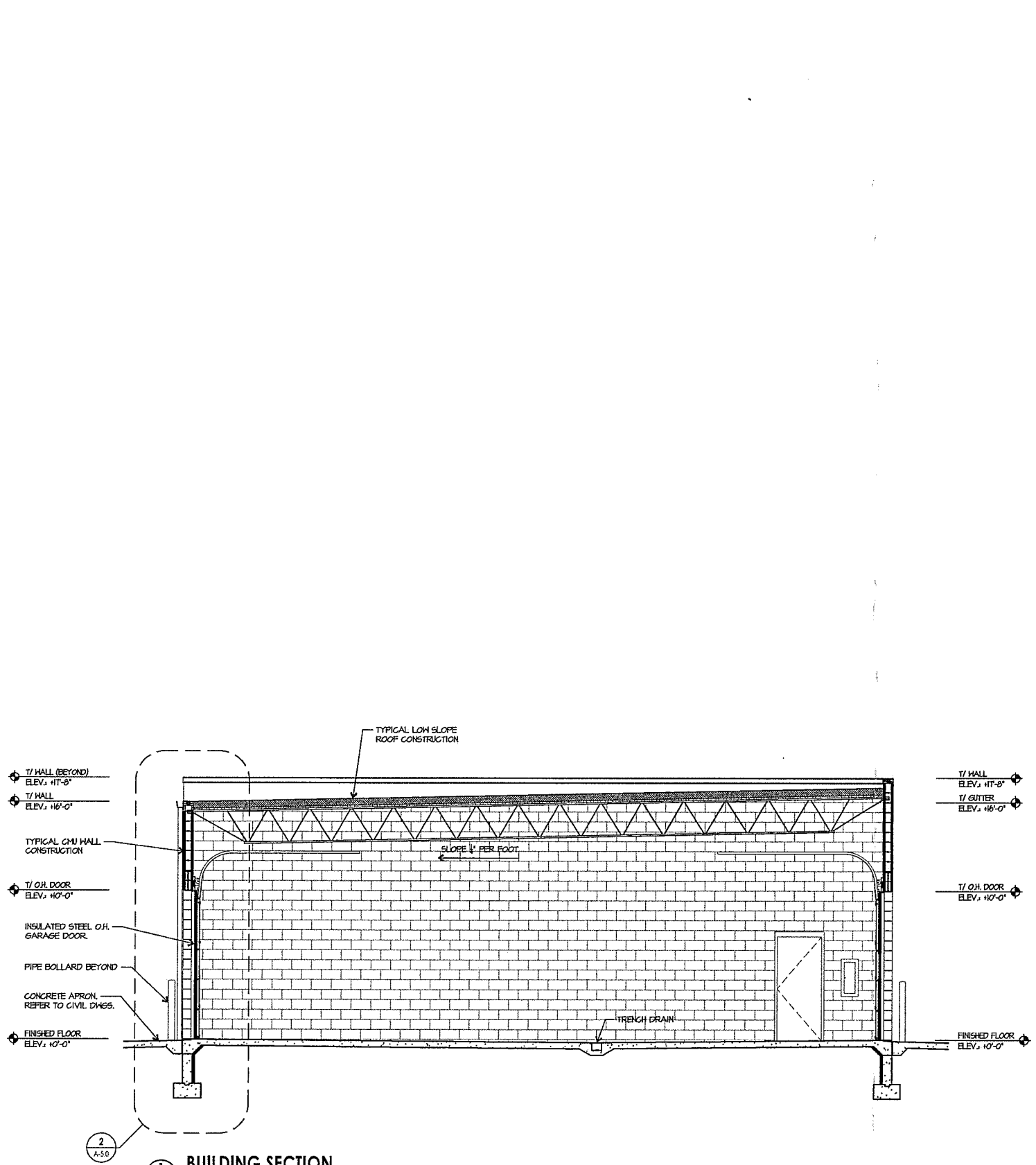
PROPOSED EXTERIOR ELEVATIONS

SHEET NAME

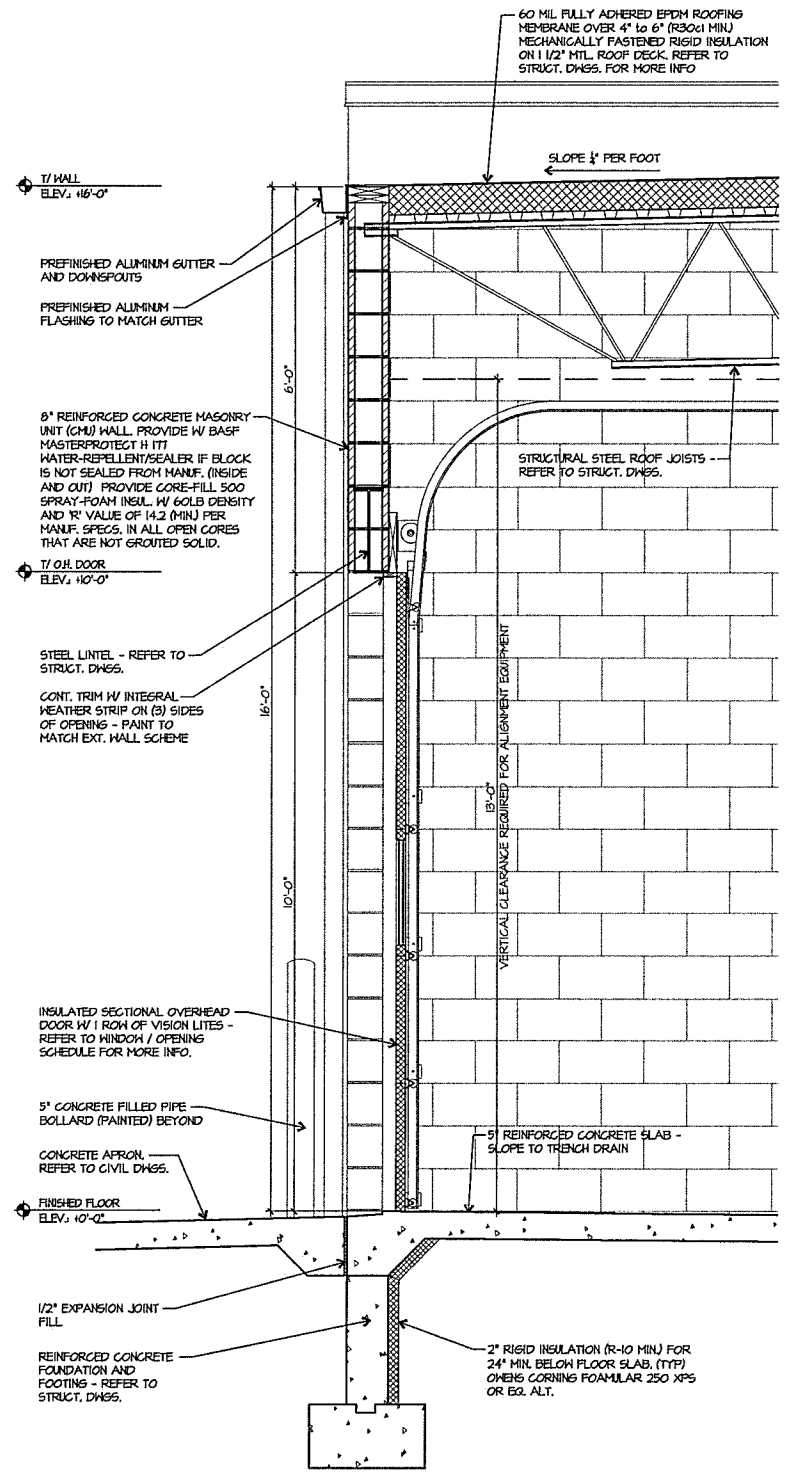
A-4.0

SHEET



1 A-5.0 **BUILDING SECTION**

SCALE: 1/4" = 1'-0"



2 A-5.0 **WALL SECTION AT O.H. DOOR**

SCALE: 3/4" = 1'-0"

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BUILDING AND WALL SECTION

SHEET NAME
A-5.0
SHEET

SHEET 5 OF 5