

CONTRACT No. 97270

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE DRAWINGS AND REPORT ANY DISCREPANCY TO THE ARCHITECT.
2. SEE THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ANY FLOOR AND ROOF OPENINGS, TRENCHES, PITS, PIPE SLEEVES, CHAMFERS, ANCHORS, MISCELLANEOUS STEEL, ETC. WHICH WILL BE REQUIRED.
3. COST OF FURNISHING ALL LABOR, AND MATERIALS NECESSARY AND REQUIRED TO SATISFACTORILY COMPLETE THE WORK FOR THE PASSENGER SHELTER AS SHOWN ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS SHALL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR "PASSENGER SHELTER", PER LINE SUM.

BUILDING: 2003 INTERNATIONAL BUILDING CODE

CONCRETE: 1. FOR REINFORCED CONCRETE - ACI LATEST EDITION
2. FOR CONCRETE MASONRY STRUCTURES ACI 531 - LATEST EDITION
3. CRSI HANDBOOK
4. CONCRETE DETAILS - DESIGN, DETAILING FABRICATION AND ERECTION SHALL COMPLY WITH THE ACI 'MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE' AND 'SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS'.

STRUCTURAL STEEL: AISC "SPECIFICATIONS FOR DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" - LATEST EDITION.

WELDING: AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE"

COLD FORMED STEEL: AISI "SPECIFICATIONS FOR THE DESIGN OF COLD - FORMED STEEL
STRUCTURAL MEMBERS" - LATEST EDITION

DESIGN LOADS

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FLOOR LIVE LOADS:
SLAB ON GRADE                      = 125 PSF

ROOF LIVE LOAD                      = 20 PSF

ROOF SNOW LOAD:
GROUND SNOW LOAD (PG)              = 20 PSF
SNOW EXPOSURE FACTOR (CE)          = 0.9
SNOW LOAD IMPORTANCE (ID)          = 1.0
ROOF THERMAL FACTOR (CT)           = 1.2

WIND LOAD:
BASIC WIND SPEED (3 SECOND GUST)   = 90 MPH
EXPOSURE C                          = 1.0
WIND LOAD IMPORTANCE (ID)          = 1.0

EARTHQUAKE LOAD:
SEISMIC USE GROUP I
SPECTRAL RESPONSE COEFFICIENT:
    S DS                            = 0.48
    S D1                            = 0.19
SITE CLASS C
BASIC SEISMIC FORCE RESISTING SYSTEM
MOMENT FRAME
ANALYSIS PROCEDURE                 = EQUIVALENT LATERAL FORCE PROCEDURE

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1. THE FOUNDATION HAS BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL REPORT PREPARED BY QUALITY TESTING AND ENGINEERING, INC. DATED OCTOBER 12, 2005 AND ADDENDUM DATED NOVEMBER 25, 2005.
2. FOOTINGS SHALL BEAR ON UNDISTURBED EXISTING FILL MATERIAL OR NEWLY PLACED LEAN CONCRETE IN ACCORDANCE WITH THE ABOVE. REQUIRED GEOTECHNICAL REPORT CAPABLE OF SUSTAINING A NET ALLOWABLE BEARING PRESSURE OF 2,500 PSF. UNDER FULL SERVICE AND DEAD LOADS.
3. ALL BEARING MATERIAL FOR SUPPORTING FOOTINGS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THEIR CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. THE CONTRACTOR SHALL NOTIFY THE OWNER (3) WORKING DAYS IN ADVANCE FOR INSPECTION BY THE GEOTECHNICAL ENGINEER.
4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED ITS 28 DAY STRENGTH.

1. REINFORCED CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
2. ALL REINFORCING STEEL SHALL BE GRADE 60, 60,000 PSI YIELD POINT DEFORMED BARS IN ACCORDANCE WITH THE LATEST ASTM SPECIFICATIONS.
3. MINIMUM CONCRETE PROTECTION. SEE TABLE BELOW:

	ITEMS	MINIMUM COVER (IN)
A.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B.	CONCRETE EXPOSED TO EARTH WEATHER OR SEWERAGE #5 THRU #18 BARS #5 BARS OR SMALLER	2 2 1/2
C.	BEAMS AND COLUMNS PRIMARY REINFORCEMENT, TIES, STIRRUPS, OR SPIRALS	1 1/2
D.	CONCRETE NOT EXPOSED TO WEATHER, SEWAGE OR IN CONTACT WITH GROUND: #14 AND #18 BARS #11 BAR AND SMALLER	1 1 1/2

4. ALL REINFORCING BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS BOTH WAYS. ALL BAR JOINTS AND ANCHOR BOLTS MUST BE POSITIONED BEFORE CONCRETE IS PLACED.
5. ALL REINFORCING BARS ARE TO BE DETAILED AND PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2015 IBC, 2015 ACI 318M, AND 2015 ACI 308R FOR CONCRETE STRUCTURES. SHRINKAGE AND TEMPERATURE STEEL SHALL HAVE A MINIMUM 30 BAR DIAMETER LAP. BASIC SPlice LENGTHS SHALL BE TYPE C FOR CONCRETE.
6. ALL CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED.
7. PROVIDE CONSTRUCTION JOINTS OR CONTROL JOINTS IN THE SLAB ON GRADE AS SHOWN ON THE PLANS.

1. CONSTRUCTION JOINTS SHALL BE LOCATED NEAR THE CENTER OF SPANS OF SLABS, BEAMS OR GIRDERS EXCEPT AT INTERSECTIONS OF BEAMS OR GIRDERS, IN WHICH CASE JOINTS SHALL BE OFFSET A DISTANCE EQUAL TO TWICE THE WIDTH OF THE BEAM AND PROVISIONS SHALL BE MADE FOR TRANSFER OF SHEAR AND OTHER FORCES THROUGH THE CONSTRUCTION JOINT UNLESS OTHERWISE SHOWN ON THE DRAWINGS.

2. REINFORCING STEEL SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS.
3. WHERE A JOINT IS MADE, THE SURFACE OF THE CONCRETE SHALL BE ROUGHENED, THOROUGHLY CLEANED AND ALL LAITANCE REMOVED. IN ADDITION, VERTICAL JOINTS SHALL BE THOROUGHLY WETTED AND SLUSHED WITH A COAT OF NEAT CEMENT GROUT IMMEDIATELY BEFORE PLACING NEW CONCRETE.
4. SLABS ON GRADE OR NON-STRUCTURAL SLABS SHALL HAVE CONTROL JOINTS IN BOTH DIRECTIONS SPACED AT NOT MORE THAN 10'-0" IN CENTER. ISOLATION JOINTS SHALL BE PROVIDED AROUND COLUMNS AND AT INTERSECTIONS OF SLABS AND WALLS. CONTROL JOINTS SHALL BE PROVIDED ON EXPOSED SURFACES OF WALLS, SPACED AT NOT MORE THAN 25'-0" IN CENTER.

1. ALL CONCRETE BLOCK MASONRY SHALL CONFORM TO ASTM C90 FOR NORMAL WEIGHT (135PCF) BLOCK WITH MINIMUM NET AREA COMPRESSIVE STRESS OF 1900 PSI.
2. ALL MASONRY WALLS SHALL HAVE TRUSS TYPE HORIZONTAL JOINT REINFORCEMENT WITH TWO W 1.7 SIZE RODS. SPACE HORIZONTAL REINFORCEMENT AT 16" O.C. VERTICALLY.
3. ALL REINFORCING SHALL BE SECURED IN PLACE AND INSPECTED BEFORE GROUTING.
4. ALL BOND BEAMS SHALL BE GROUTED SOLID AND HAVE 2- #5 CONTINUOUS BARS UNLESS OTHERWISE NOTED. HORIZONTAL BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS OF THE STRUCTURE. REINFORCEMENT SHALL BE DETAILED AND PLACED TO PROVIDE PROPER ANCHORAGE WITH HOOKS OR BENDS.
5. ALL BOLTS, ANCHORS, ETC. INSERTED INTO THE MASONRY WALLS SHALL BE HOT-DIPPED GALVANIZED AND SOLIDLY GROUTED IN PLACE.
6. FILL CELLS WITH GROUT AT ALL BOND BEAMS, REINFORCED PILASTERS, AND FOR 3 COURSES UNDER BEARING OF LINTELS AND BEAMS, UNLESS NOTED OTHERWISE.
7. VERTICAL REINFORCING STEEL SHALL HAVE A MINIMUM CLEARANCE OF 3/4" FROM THE MASONRY.
8. ALL REINFORCING STEEL FOR THE MASONRY SHALL BE GRADE 60, 60,000 PSI YIELD POINT DEFORMED BARS IN ACCORDANCE WITH THE LATEST ASTM SPECIFICATIONS.

1. 8"x8"x16" MODULAR SIZE SPLIT FACE LOAD BEARING CONCRETE MASONRY UNITS FOR EXTERIOR USE AS SELECTED BY OWNER FROM MANUFACTURE'S STANDARD.
2. INSTALL IN RUNNING BOND, FORM VERTICAL AND HORIZONTAL JOINTS OF UNIFORM THICKNESS.
3. PROVIDE MATCHING CORNER, BOND BEAMS, LINTEL, INFILL, ETC. CONCRETE MASONRY UNIT PLACES AS REQUIRED.
4. MORTAR FOR REINFORCED MASONRY: ASTM C270, TYPE S USING THE PROPERTY METHOD. COLOR SELECTED BY OWNER. CONCAVE MORTAR JOINTS.
5. REINFORCING STEEL: ASTM A615, 60 KSI YIELD GRADE, DEFORMED BILLET STEEL BARS.
6. HORIZONTAL REINFORCING TRUSS TYPE, HOT DIPPED GALVANIZED COLD DRAWN STEEL CONFORMING TO ANSI/ASTM A82, 3/4" SIDE RODS WITH NO. 9 CROSS TIES, AT 16" O.C.
7. INSTALL EXPANSION AND CONTROL JOINTS AS REQUIRED BY STANDARD MASONRY PRACTICE. VERIFY LOCATIONS WITH ARCHITECT PRIOR TO CONSTRUCTION.

1. 8"X8"X16" MODULAR SIZE CONCRETE MASONRY UNITS, ASTM C90, GRADE N, TYPE 1 - MOISTURE CONTROLLED, NORMAL WEIGHT.
2. INSTALL IN RUNNING BOND, BOND VERTICAL AND HORIZONTAL JOINTS OF UNIFORM THICKNESS.
3. PROVIDE MATCHING CORNER, BOND BEAMS, LINTEL, INFILL, ETC. CONCRETE MASONRY UNIT PIECES AS REQUIRED.
4. MORTAR FOR REINFORCED MASONRY: ASTM C270, TYPE S USING THE PROPERITY METHOD. COLOR SELECTED BY OWNER. CONCAVE MORTAR JOINTS.
5. REINFORCING STEEL: ASTM A615, 60 KSI YIELD GRADE, DEFORMED BILLET STEEL BARS.
6. HORIZONTAL REINFORCING TRUSS TYPE, HOT DIPPED GALVANIZED COIL DRAWN STEEL CONFORMING TO ANSI/ASTM A92, 3/8" SIDE RODS WITH NO. 9 CROSS TIES, AT 16' O.C.
7. INSTALL EXPANSION AND CONTRL JOINTS AS REQUIRED BY STANDARD MASONRY PRACTICE, VERIFY LOCATIONS WITH ARCHITECT PRIOR TO CONSTRUCTION.

1. GROUT FOR MASONRY WALLS: 5,000 PSI STRENGTH AT 28 DAYS, PREMIXED TYPE IN ACCORDANCE WITH ASTM C94, MIXED IN ACCORDANCE WITH ASTM C476 FINE GROUT.
2. REFER TO DRAWINGS FOR LOCATION OF GROUTED MASONRY WALLS.
3. GROUT LIFT HEIGHTS SHALL BE LIMITED TO 5 FEET. A LIFT OF GROUT SHALL BE PERMITTED TO SET FOR MORE THAN 2 HOURS PRIOR TO PLACING ANY SUBSEQUENT LIFTS

1. ALL STRUCTURAL STEEL SHALL BE ASTM A-36, FY=36,000 PSI YIELD POINT OR GREATER.
2. ALL STRUCTURAL STEEL SHALL BE PROPERLY GUYED AND BRACED UNTIL THE COMPLETE FLOOR AND ROOF FRAMING IS COMPLETED.
3. ALL BOLTS CONNECTIONS SHALL BE DESIGNED FOR LOADS BASED UPON AISC LOAD SPAN TABLES USING 3/4" ROUND A-325 HIGH STRENGTH BOLT, UNLESS OTHERWISE NOTED.
4. SEE MECHANICAL DRAWINGS FOR ANY ROOF OPENINGS, PIPE SLEEVES, ETC. WHICH WILL BE REQUIRED.
5. ALL TESTING OF WELDS SHALL CONFORM TO THE AWS/AAS SPECIFICATIONS FOR ULTRASONIC TESTING.
6. ALL BEAMS BEARING ON MASONRY SHALL HAVE 8" MINIMUM BEARING ON REINFORCED PILASTERS.
7. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM A-307, AND SHALL BE HOT-DIPPED GALVANIZED.
8. ALL WELDS SHALL BE MADE BY CERTIFIED WELDERS.
9. ALL STEEL SHALL BE PRIME AND PAINTED.

1. ALL FRAMING WOOD SHALL BE NO. 2 SOUTHERN PINE (SPF) OR BETTER.
2. ALL NAILING & FASTENING SHALL BE IN ACCORDANCE WITH THE 2003 IBC CODE FASTENING SCHEDULE, TABLE 2304.5.1, UNLESS NOTED OTHERWISE.
3. PROVIDE SIMPSON STRONG TIE CONNECTORS, JOIST HANGERS ETC. AS INDICATED ON DRAWINGS
4. ALL WOOD IN CONTACT WITH CONCRETE, MASONRY AND FOR EXTERIOR USE SHALL BE VOLUMINIZED (PRESERVATIVE PRESSURE TREATED)
5. BUILDING PAPER: 15# BUILDING PAPER.

IF THE CONTRACTOR CHOOSES TO USE PREFABRICATED WOOD TRUSSES, THE FOLLOWING NOTES SHALL APPLY:

1. DESIGN OF WOOD TRUSSES IS THE SOLE RESPONSIBILITY OF THE MANUFACTURER. FABRICATION AND DESIGN SHALL MEET THE FOLLOWING CRITERIA (LATEST EDITIONS):
 1. "NATIONAL DESIGN SPECIFICATION" BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
 2. "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES" BY THE TRUSS PLATE INSTITUTE.
 3. "TIMBER CONSTRUCTION MANUAL" BY THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS THAT HAVE BEEN SEALED BY A LICENSED STRUCTURAL ENGINEER FOR THE STATE OF ILLINOIS FOR REVIEW. DRAWINGS SHALL SHOW THE DESIGN LOADS, MEMBER STRESSES, AND MEMBER DESIGNS. THE CONTRACTOR SHALL ALSO PROVIDE AN ERECTION DRAWING ALONG WITH THE SHOP DRAWINGS.
3. ERECTION AND TEMPORARY BRACING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE COST FOR FURNISHING AND INSTALLING THIS BRACING SHALL BE INCLUDED IN THE CONTRACTORS BID. BRACING REQUIREMENTS SHALL MEET THE TRUSS PLATE INSTITUTE'S PUBLICATION BWT-76, "BRACING WOOD TRUSSES": COMMENTARY AND RECOMMENDATIONS.
4. TRUSSES SHOWN ARE FOR SCHEMATIC AND DIMENSIONS ONLY. THE MANUFACTURE SHALL DETERMINE THE WEB CONFIGURATION, MEMBER SIZE, MEMBER STRESSES AND LUMBER GRADES.
5. WOOD ROOF TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
 1. TOP CHORD LIVE LOAD = 20 POUNDS PER SQUARE FOOT
 2. TOP CHORD DEAD LOAD = 16 POUNDS PER SQUARE FOOT
 3. BOTTOM CHORD DEAD LOAD = 10 POUNDS PER SQUARE FOOT
6. CAMBER TRUSSES FOR THE DEAD LOAD PLUS 1/2 OF THE LIVE LOAD.
7. SEE THE ARCHITECTURAL DRAWINGS FOR ROOF FRAMING.

1. VERIFY LOCATION AND CONNECTION OF ALL DOWN SPOUTS WITH ARCHITECTURAL DRAWINGS

1. DIMENSION VERIFICATION. VERIFY DIMENSIONS OF OPENINGS IN FLOORS, ROOFS, WALLS, AND ASSOCIATED SURVEYING FRAMING AND ANCHOR BOLT SIZES AND LOCATIONS WITH ANY MECHANICAL EQUIPMENT WITH THE ACTUAL EQUIPMENT FURNISHED FOR THE PROJECT.
2. FOR OPENING SLEEVES, BLOCK OUTS AND EMBEDDED ITEMS, NOT SHOWN ON THE STRUCTURAL DRAWINGS, REFER TO THE ARCHITECTURAL, MECHANICAL, CIVIL, AND ELECTRICAL DRAWINGS.
3. SEE THE ARCHITECTURAL PLANS, ELEVATIONS, DETAILS, AND SPECIFICATIONS FOR TYPES AND LOCATIONS OF FLOOR AND WALL FINISHES.
4. ALL GROUT SHALL BE NONMETALLIC, NON-SHRINK GROUT INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
5. THE GRANULAR BASE COURSE SHALL BE APPROVED BY THE ARCHITECT.
6. ALL COLUMNS AND FOOTINGS ARE CENTERED ON COLUMN LINES, EXCEPT WHERE OTHERWISE SHOWN ON THE PLANS OR SECTIONS.
7. DURING CONSTRUCTION OPERATIONS, TEMPORARY BRACING AND/OR SHORING SHALL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING EQUIPMENT AND THE OPERATION OF SAME. SUCH BRACING AND/OR SHORING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY.
8. NO OPENING SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
9. NO CHANGE IN SIZES OR DIMENSIONS OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
10. OPENING'S 1'-0" AND LESS ON THE ROOF ARE GENERAL NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO THE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SUCH OPENINGS.
11. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON THE STRUCTURAL FRAMING AND LOAD BEARING WALLS. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF STRUCTURAL ELEMENTS AT ANY TIME DURING THE CONSTRUCTION.
12. DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS.
13. THE CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS COMPLETE.
14. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECT'S APPROVAL OF THE SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATIONS AT THE TIME OF SUBMISSION, AND ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
15. ALL ITEMS WHICH IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT BEFORE THE EFFECTED WORK PROCEEDS.

FINAL SURVEY					SURVEYED BY	DATE
NOTE BOOK						
NO.	TEMPLATE AREAS CHECKED					

ORIGINAL SURVEY						BY _____	DATE _____
NOTE BOOK						SURVEYED PLOTTED	
						TEMPLATE	
						AREAS	
						AREAS CHECKED	
NO.							

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STRUCTURAL NOTES

HIGHLAND PARK-RIDE IMPROVEMENTS
MADISON COUNTY TRANSIT
HIGHLAND, ILLINOIS
SECTION No. 00-00012-00-PK

REVISIONS

NO.	DATE	BY	REMARKS

SCALE:

DSNL BY: JLK	DATE: 12/1/05	SHEET
DWNL BY: EER	DATE: 12/1/05	17
CHK'D: WWH	DATE: 12/1/05	
JOB NO. E054401	DWG NAME: S-NOTES	OF 18 SHTS